

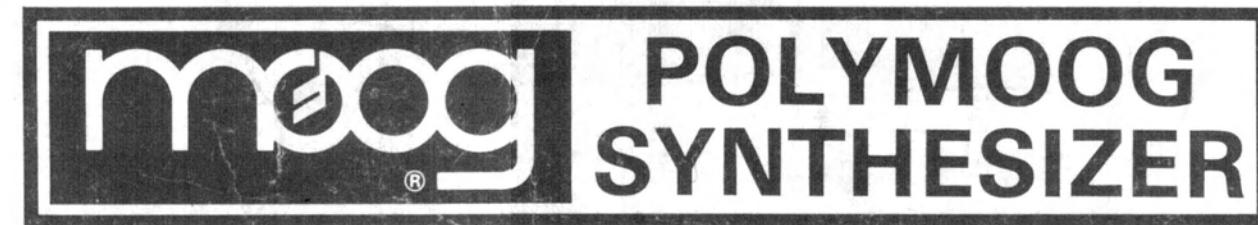
Full Polymoog Service Manual Volume II (schematics)

All missing page numbers are blank pages, nothing has been omitted for scanning

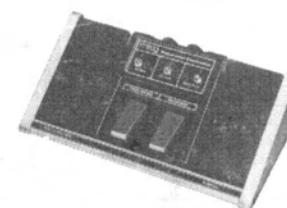
Sorry - no Volume I, which I don't have

ChristianH
07-MAR-2006

TECHNICAL SERVICE MANUAL for



Model 203A



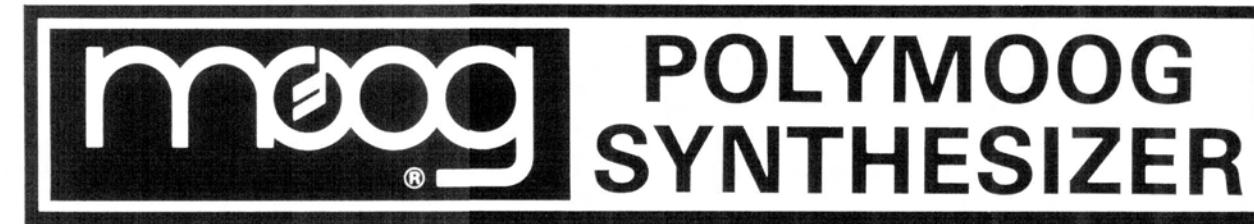
POLYPEDAL
Model 285

2500 Walden Ave.
Buffalo, N.Y. 14225

Norlin

NORLIN MUSIC
(716) 681-7242

TECHNICAL SERVICE MANUAL for



Model 203A



POLYPEDAL
Model 285

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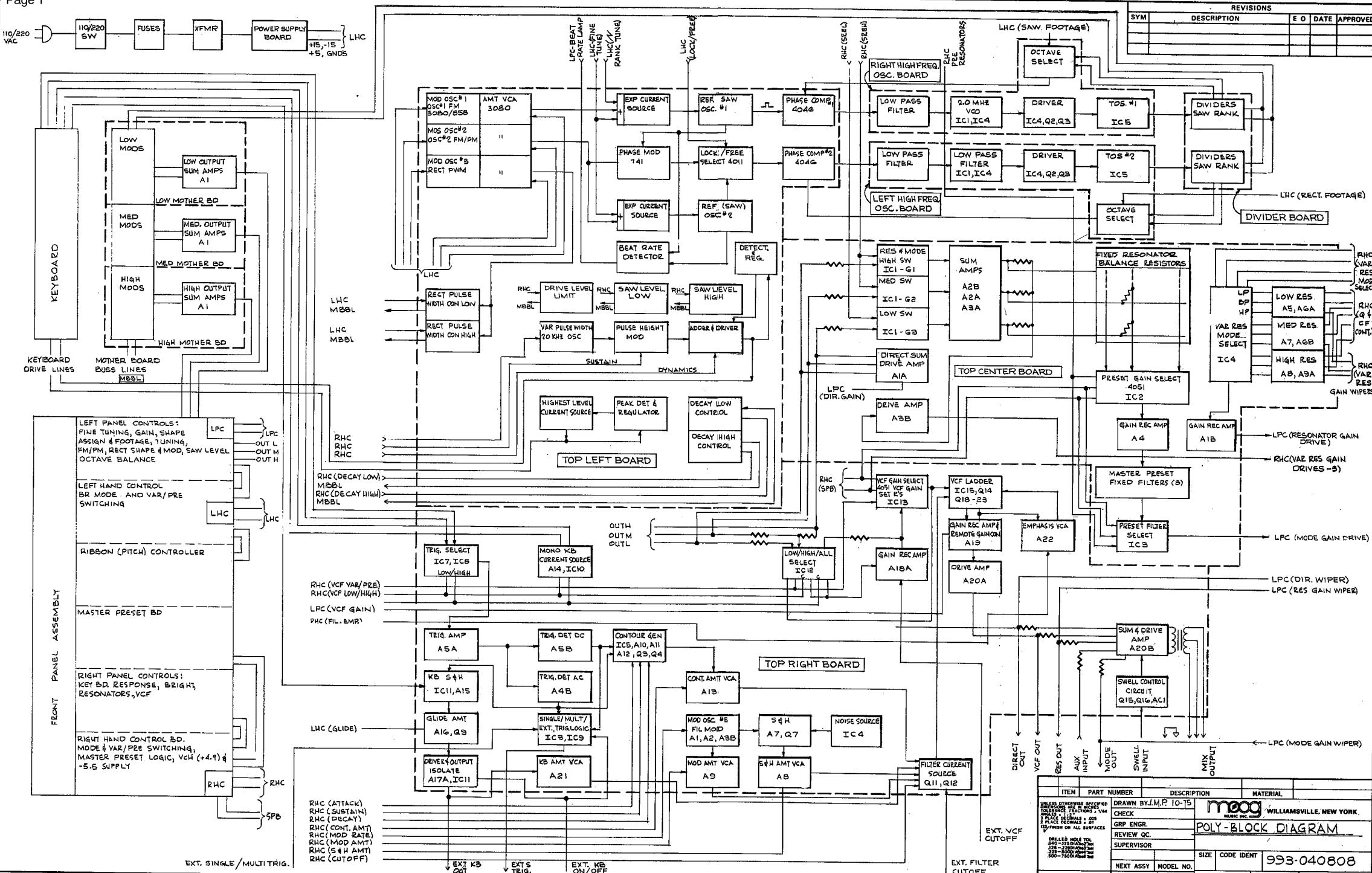
2500 Walden Ave.
Buffalo, N.Y. 14225

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Norlin
NORLIN MUSIC
(716) 681-7242

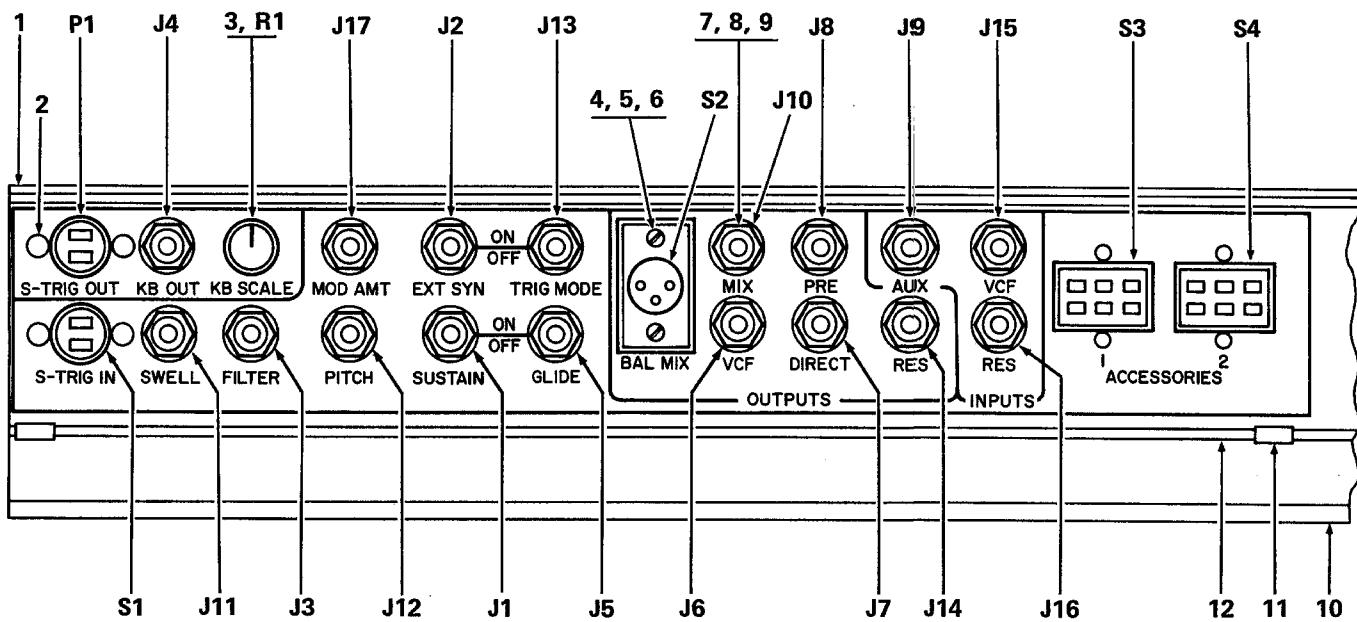
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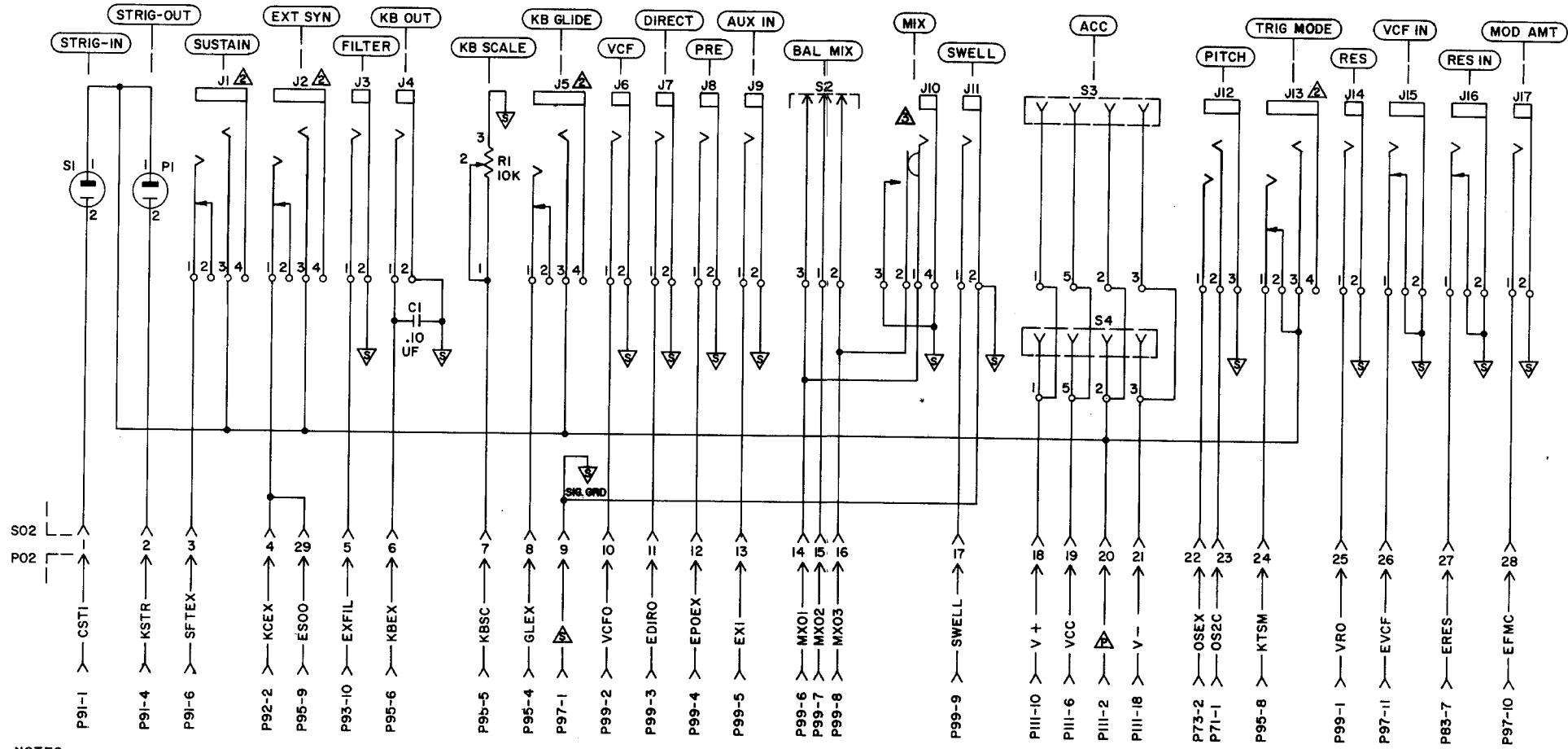


NOTES:

1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 5 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.
2. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P91 INDICATES IT IS PART OF BOARD 11. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.



REVISIONS			
SYM	DESCRIPTION	ED	DATE APPROVED
A	GEN. Revision	249	5/76
B	REVISED, SPLIT GND	249	5/76
C	ADDED C1, REV. J16 & J17	249	5/76
D	REDRAWN, RE-LAYERED FOR PROD.	253	5/76



NOTES

I. ALL JACKS ARE .250 DIA PHONE TYPE EXCEPT AS NOTED.

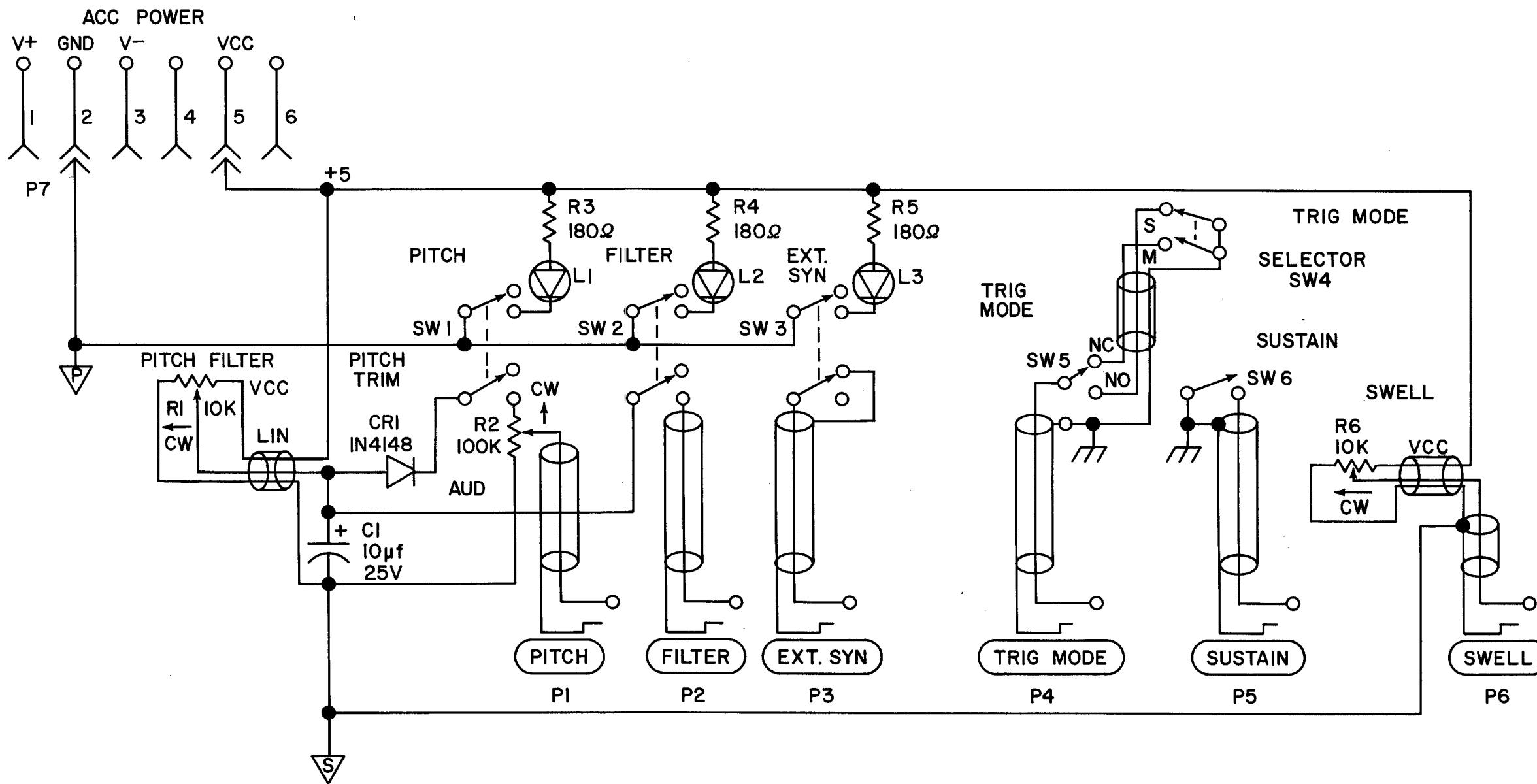
▲ .206 DIA PHONE JACK.

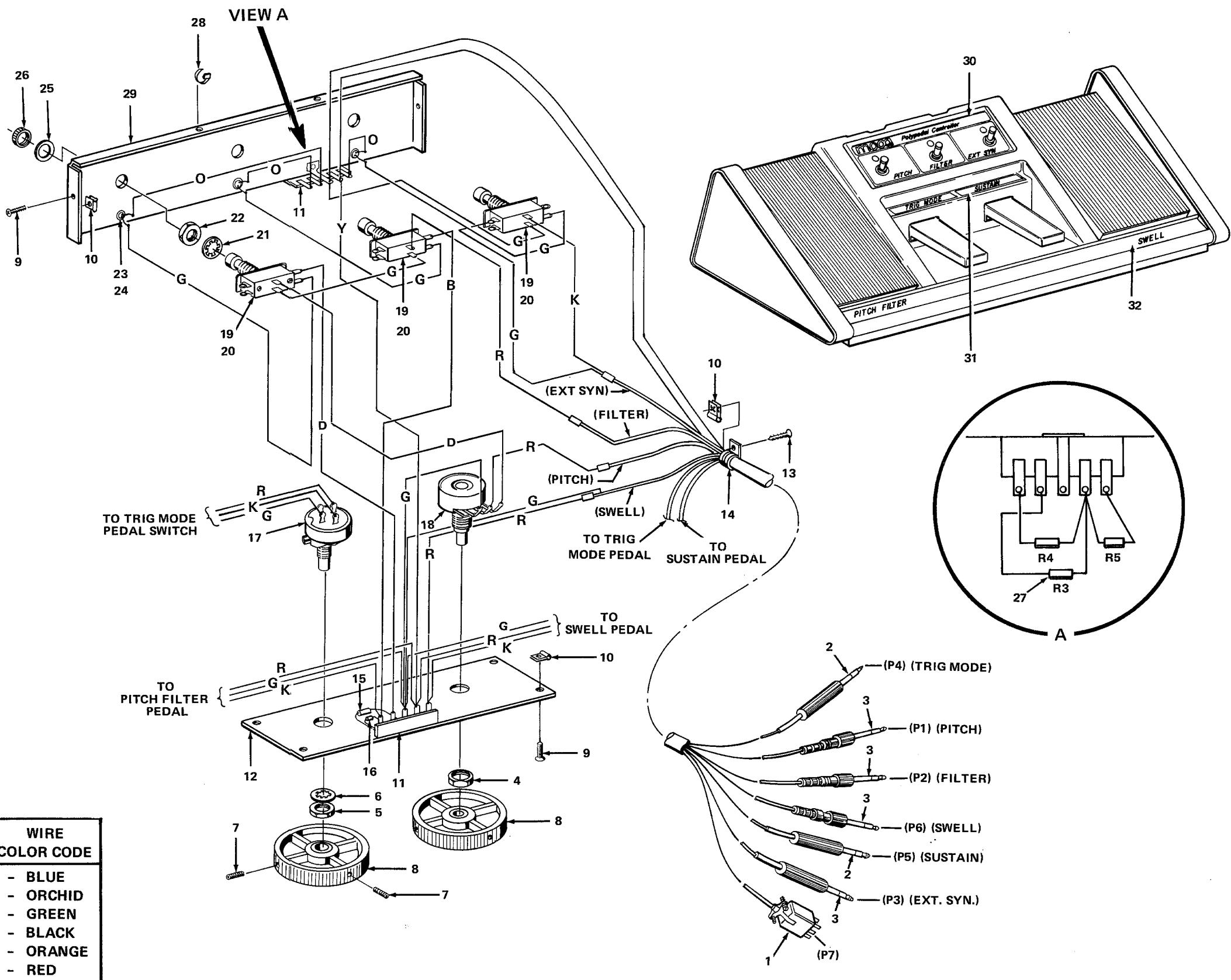
▲ .250 DIA PHONE JACK WITH INSULATED NORM. OPEN SWITCH
BETWEEN PINS 2 & 3.

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED		DRAWN BY	
ALL DIMENSIONS IN INCHES		CHECK	
1 PLACE DECIMALS & 200		GRP ENGR.	
2 PLACES DECIMALS & 01		REVIEW QC	
FOR ALL SURFACES		SUPERVISOR	
		DATE	
		993-040691	
		SHEET	
		1 OF 1	

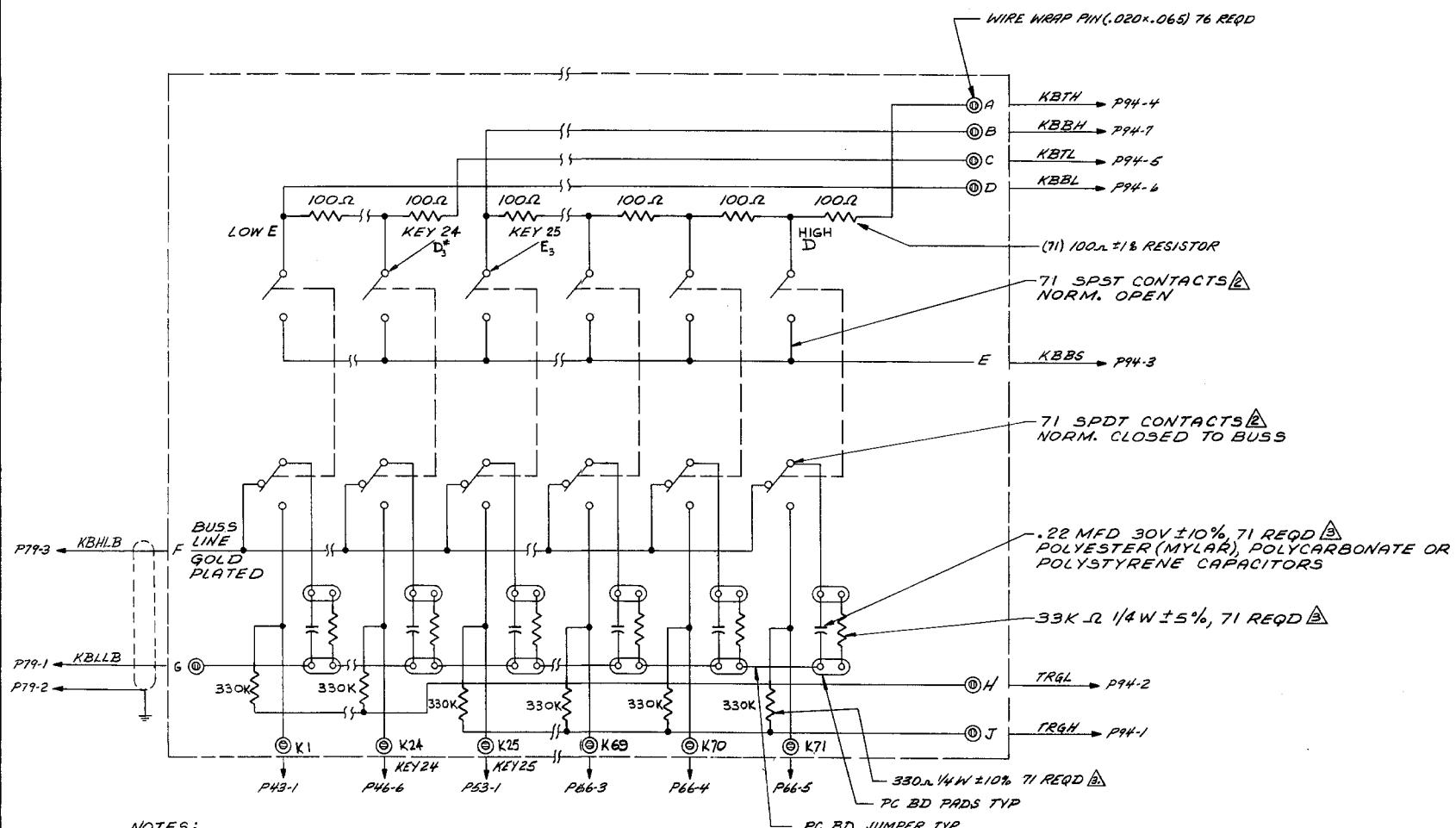
moog WILLIAMSVILLE, NEW YORK
MUSIC INC.

SCHEMATIC REAR PANEL
CONTROLS POLYMOOG





REVISIONS				
SYM	DESCRIPTION	E O	DATE	APPROVED
XB	WAS F-E, RES. PACK WAS IX, WORD (11) ^{1/3}	1/3		
A	RES. 35K RES. WAS 22K, POINTS A, B, C, E, U & T LOCATED TO HIGH END. (SEE DRAWING)	4-575		ACM 4-11
B	RELOCATED KEY SPLIT: KEY 24 WAS 28, KEY 25 WAS 30, 100-205. PACK WAS 7 REQ'D, 2 PACKS LOW END WAS 3 REQ'D.	4-575	1/10-1/15	ACM 4-11
C	250K RES. WAS 1M, RES. AND CAP. WERE 72 REQ'D. XB WAS C-B	4-575		ACM 4-11
- RELEASED FOR PRODUCTION				
D	ADDED PLUG & FUNCTION DESIGNATION REMOVED NOTCH & RESISTOR PACKS	0215 0370	1-19-77 2-19-77	ACM 4-11 ACM 4-11



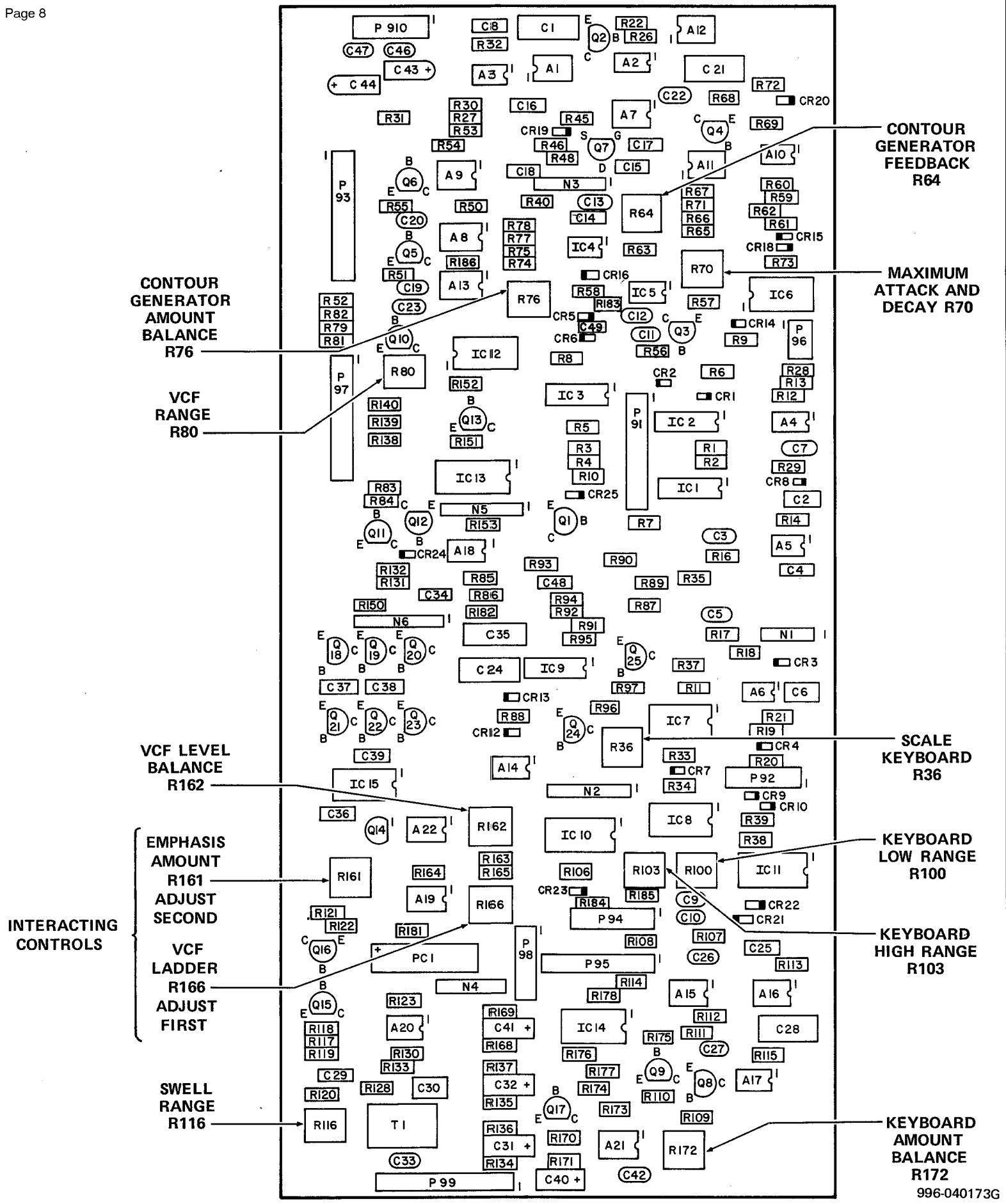
NOTES:

1. PROFESSIONAL KEYBOARD, 71 NOTE E TO D.

⚠ SPST NORM OPEN SWITCH ARM TO CONTACT (SEE CONTACT SEQUENCE SHT.) BEFORE SPDT SWITCH SPRING CONTACTS.

▲ TO BE SUPPLIED & INSTALLED BY PRATT & READ ON KEYBOARD PCB.

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED TOLERANCE: .005-.010		DRAWN BY <i>Hans 9/17/75</i>	moog MANUFACTURED IN U.S.A.
3 PLACE DECIMALS = .000		CHECK <i>3/17/76</i>	WILLIAMSBVILLE, NEW YORK.
PRINTED ON ALL SURFACES		GRP ENGR <i>Acu 3/17/76</i>	SCHEMATIC - POLYMOOG
BRASLED HOLE TOL. 175 - 2200 ± 0.005		REVIEW QC <i>3/17/76</i>	KEYBOARD CIRCUIT E-D
500 - 750 ± 0.005		SUPERVISOR <i>W.L. 3/17/76</i>	
500 - 750 ± 0.005		203A	SIZE CODE IDENT
		NEXT ASSY MODEL NO.	D 979-040253
		APPLICATION	SCALE
			WT.
			SHEET 2 OF 2



TOP RIGHT BOARD VOLTAGES

S93-PINS	1	2	3	4	5	6	7	8	9	10
STRING	1	.181	2.50	2.50	2.50	.808	6.06	2.87	0	0
P PIANO	2	0	2.50	2.50	2.50	.245	0	.649	0	1.81
R ORGAN	3	0	2.50	2.50	2.50	.706	0	.888	0	1.26
E HARPSI	4	0	2.50	2.50	2.50	6.46	0	1.18	0	1.79
S FUNK	5	5.88	2.50	2.50	2.50	.267	0	1.78	8.60	0
E CLAV	6	0	2.50	2.50	2.50	1.25	0	.651	0	2.09
T VIBES	7	3.89	2.50	2.50	2.50	.273	3.92	1.10	0	.998
BRASS	8	0	2.50	2.50	2.50	0	0	.885	0	2.07

S95-PINS 2

STRING	1	1.61
P PIANO	2	1.20
R ORGAN	3	1.19
E HARPSI	4	1.05
S FUNK	5	1.31
E CLAV	6	1.26
T VIBES	7	1.31
BRASS	8	1.07

S96-PINS 1 2 3

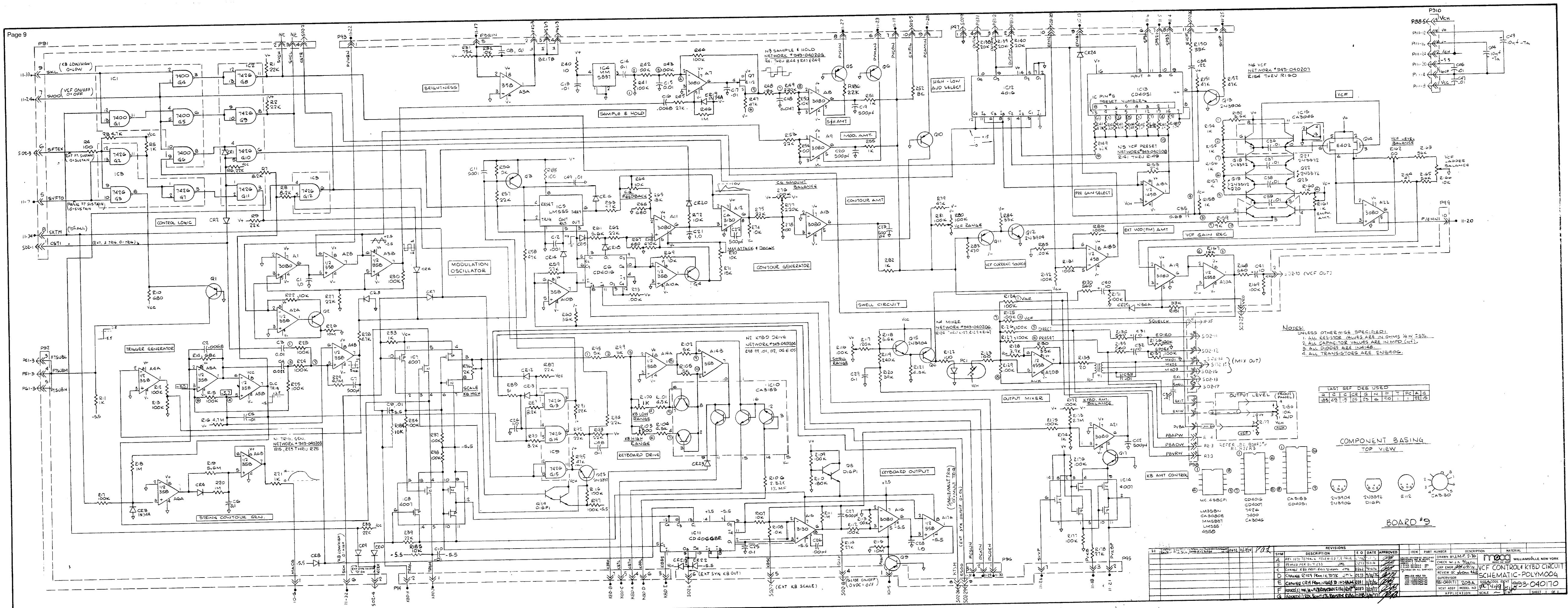
STRING	1	.760	.065	0
P PIANO	2	.573	.544	1.93
R ORGAN	3	.450	.062	2.14
E HARPSI	4	2.59	.546	.141
S FUNK	5	0	0	0
E CLAV	6	.933	.263	2.15
T VIBES	7	3.09	6.70	2.06
BRASS	8	1.56	1.83	1.58

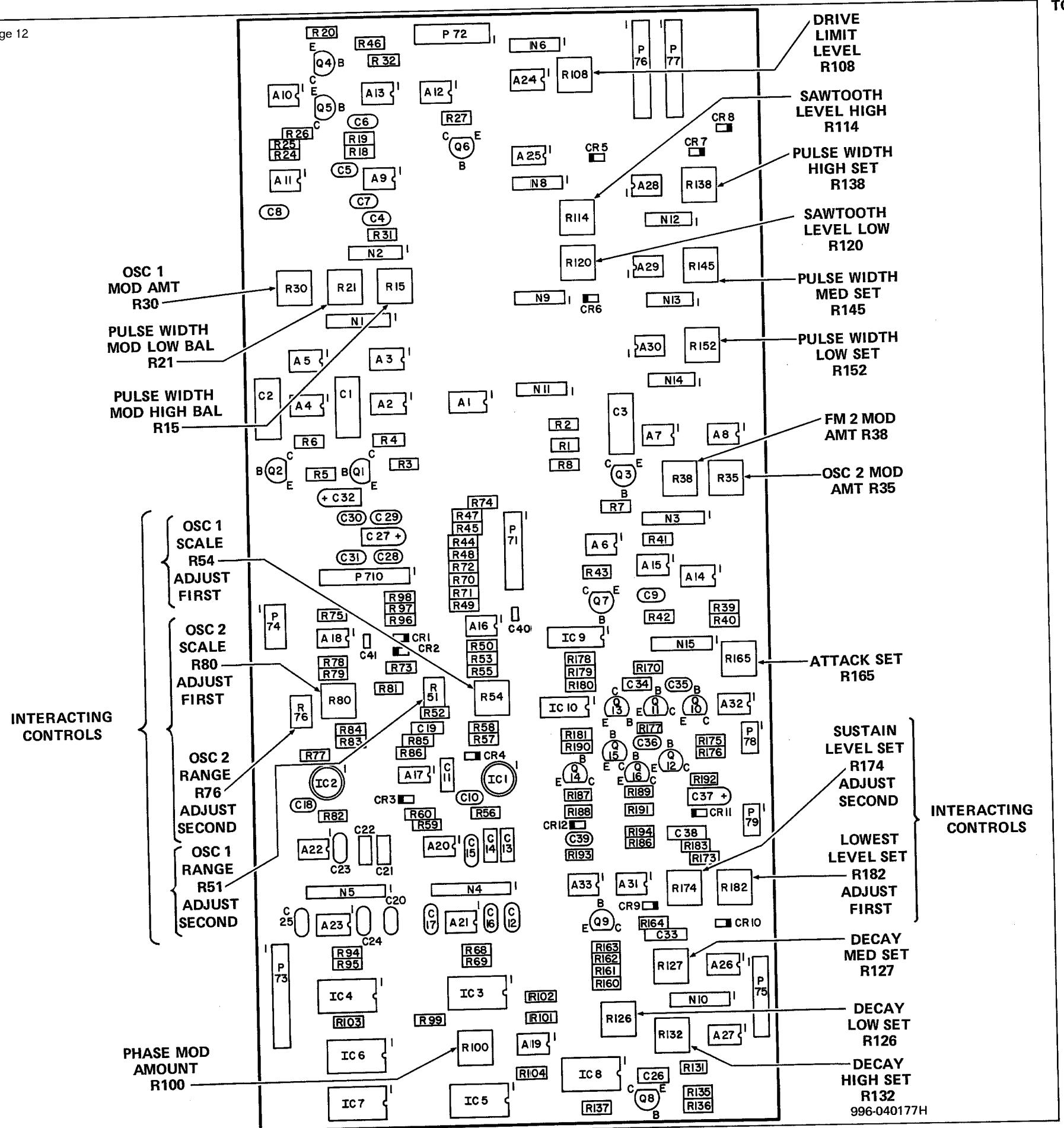
S99-PINS 10

STRING	1	1.35
P PIANO	2	1.71
R ORGAN	3	2.08
E HARPSI	4	.926
S FUNK	5	1.85
E CLAV	6	2.09
T VIBES	7	0
BRASS	8	0

NOTES:

1. CONNECTOR VOLTAGES MUST BE READ WITH CONNECTORS REMOVED FROM RESPECTIVE BOARD.
2. FOR PRESET 2 STRINGS, READINGS MUST BE TAKEN WITH A KEY DEPRESSED.
3. VOLTAGES ARE FOR INSTRUMENTS ABOVE S/N 3000.
4. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 9 FOR THE PART NUMBER AND DESCRIPTION OF EACH REFERENCE DESIGNATOR.

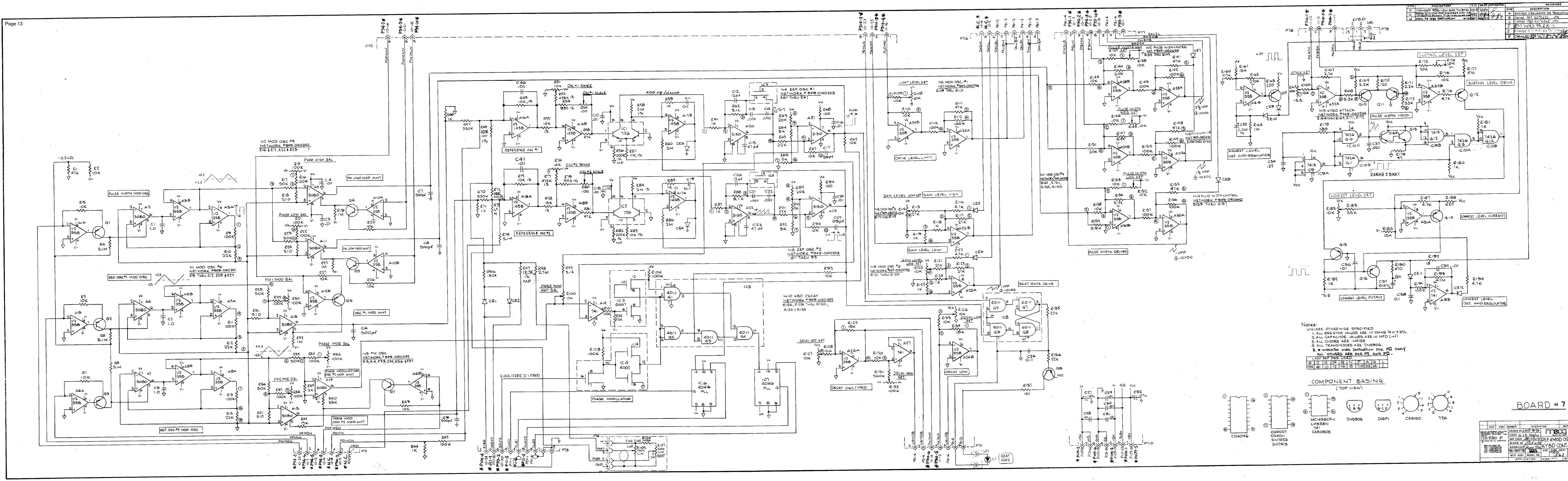


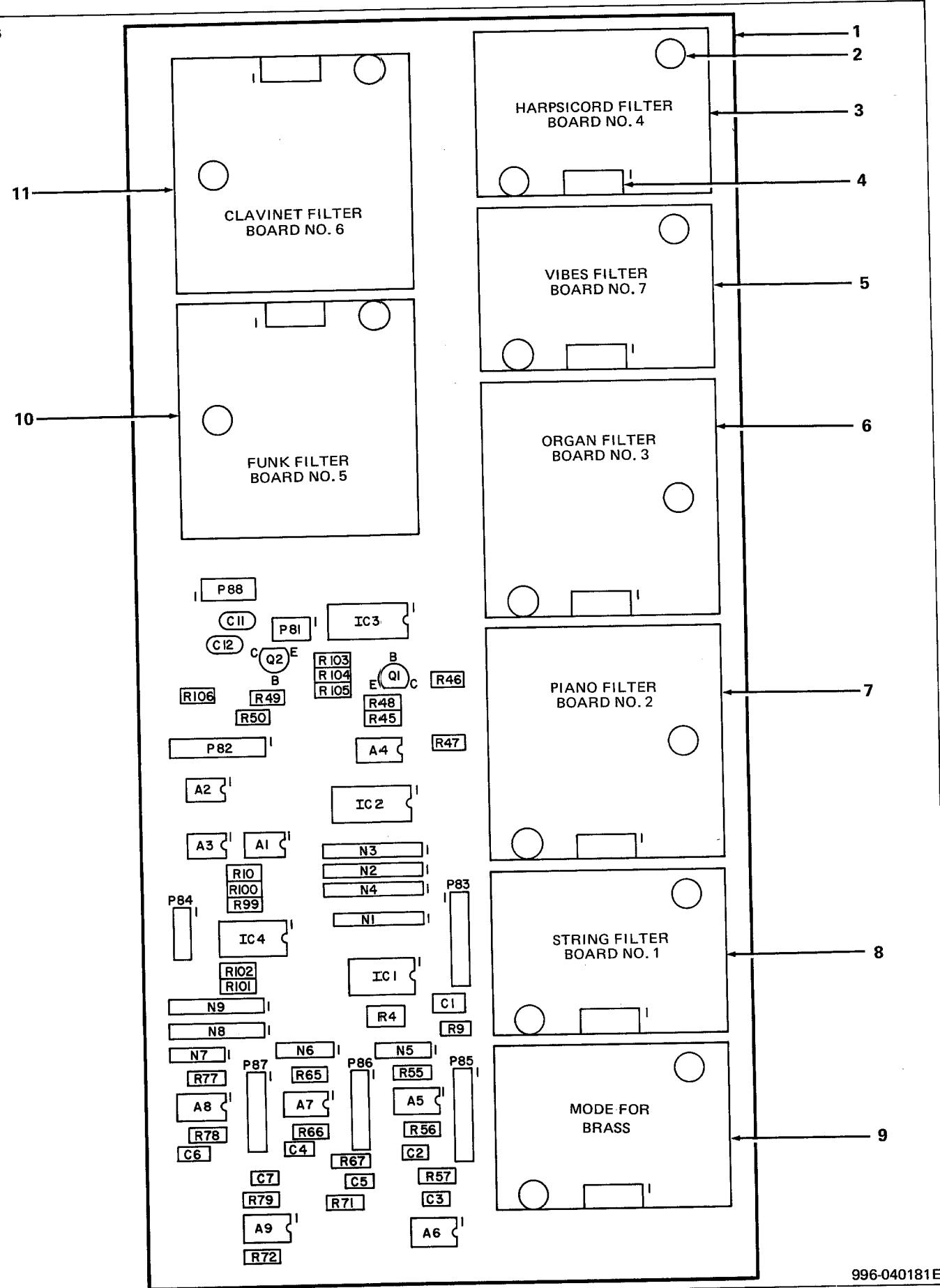


TOP LEFT BOARD VOLTAGES								
	S71-PINS	1	2	3	4	5	6	7
	STRING	1	0	8.25	3.75	0	0	4.29
P	PIANO	2	0	0	.294	0	0	0
R	ORGAN	3	0	0	3.80	0	0	0
E	HARPSI	4	0	0	0	0	0	.505
S	FUNK	5	0	0	1.86	0	0	2.87
E	CLAV	6	0	0	.292	0	0	.750
T	VIBES	7	0	0	0	0	0	4.44
	BRASS	8	0	0	0	0	6.30	.603
	S72-PINS	1	2	3	4	5	6	
	STRING	1	1.63	1.27	1.24	8.38	1.47	2.00
P	PIANO	2	.408	.290	.293	0	.650	.418
R	ORGAN	3	1.63	1.71	1.71	0	1.44	2.21
E	HARPSI	4	1.63	1.87	1.92	0	.889	.568
S	FUNK	5	1.63	.939	.937	0	5.75	6.10
E	CLAV	6	1.00	.699	.687	0	1.31	.741
T	VIBES	7	.508	1.44	1.43	0	0	0
	BRASS	8	1.63	1.88	1.88	0	0	0
	S75-PINS	1	4					
	STRING	1	.540	.590				
P	PIANO	2	1.76	1.74				
R	ORGAN	3	0	0				
E	HARPSI	4	1.95	1.94				
S	FUNK	5	1.14	1.16				
E	CLAV	6	1.67	1.67				
T	VIBES	7	5.01	5.01				
	BRASS	8	0	0				
	S77-PINS	2	3	6	7	8		
	STRING	1	1.11	1.02	1.02	0	0	
P	PIANO	2	1.23	1.39	1.38	0	0	
R	ORGAN	3	.833	.705	.700	0	0	
E	HARPSI	4	.686	.545	.541	0	0	
S	FUNK	5	1.69	1.48	1.45	0	0	
E	CLAV	6	.424	.392	.397	0	0	
T	VIBES	7	3.42	3.78	3.82	0	0	
	BRASS	8	.688	.773	.769	5.00	5.00	
	S78-PINS	1	2	3				
	STRING	1	6.40	3.62	.666			
P	PIANO	2	0	0	.766			
R	ORGAN	3	1.91	2.99	.928			
E	HARPSI	4	0	0	2.75			
S	FUNK	5	0	1.00	2.77			
E	CLAV	6	0	0	.776			
T	VIBES	7	0	.752	.663			
	BRASS	8	1.65	1.64	.780			

NOTES:

1. CONNECTOR VOLTAGES MUST BE READ WITH CONNECTORS REMOVED FROM RESPECTIVE BOARD.
2. FOR PRESET 2 STRINGS, READINGS MUST BE TAKEN WITH A KEY DEPRESSED.
3. VOLTAGES ARE FOR INSTRUMENTS ABOVE S/N 3000.
4. REPLACEMENT OF INTEGRATED CIRCUITS A2, A4, A7, A9, A13, A14 OR A15 REQUIRES REALIGNMENT.

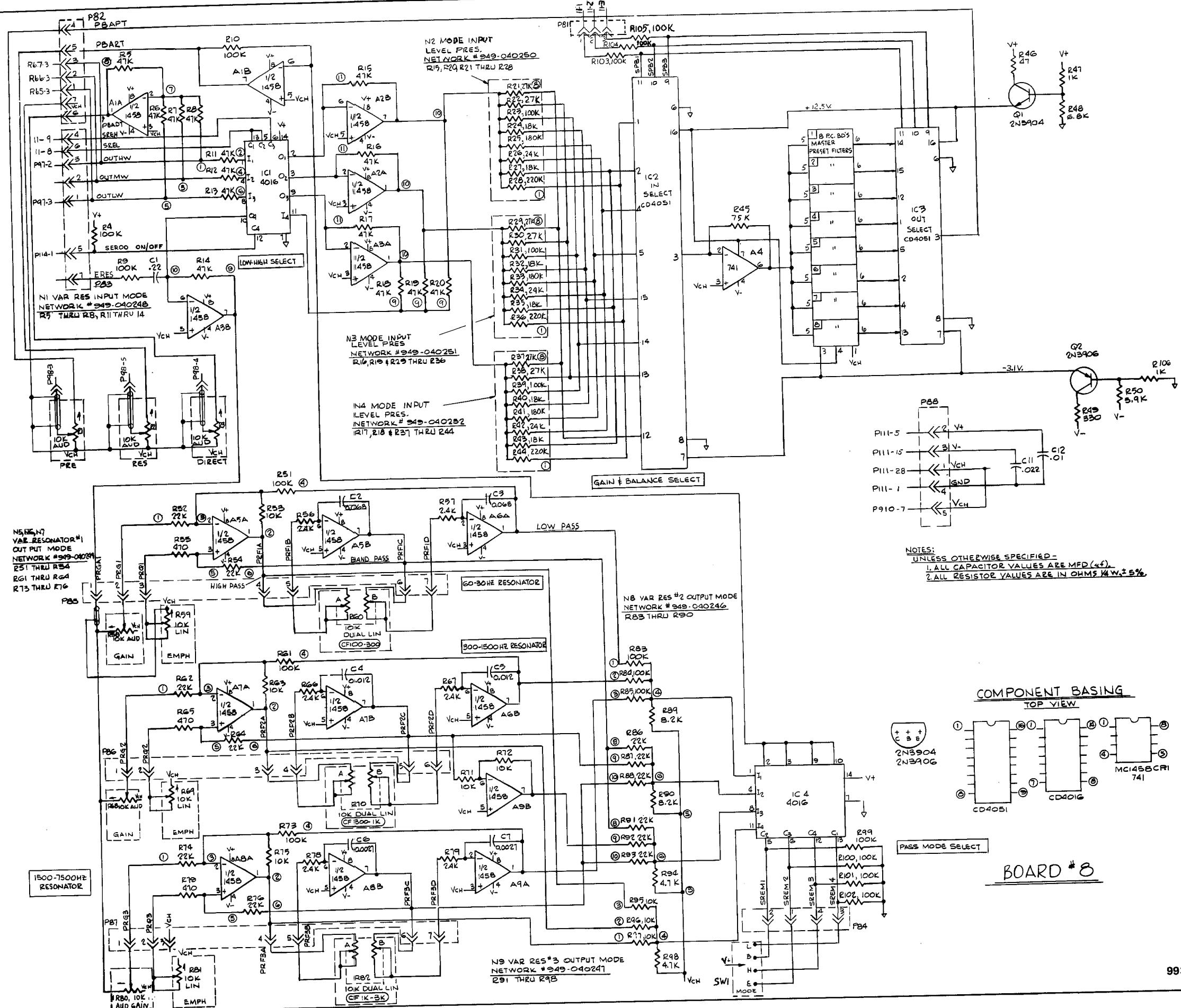




NOTES

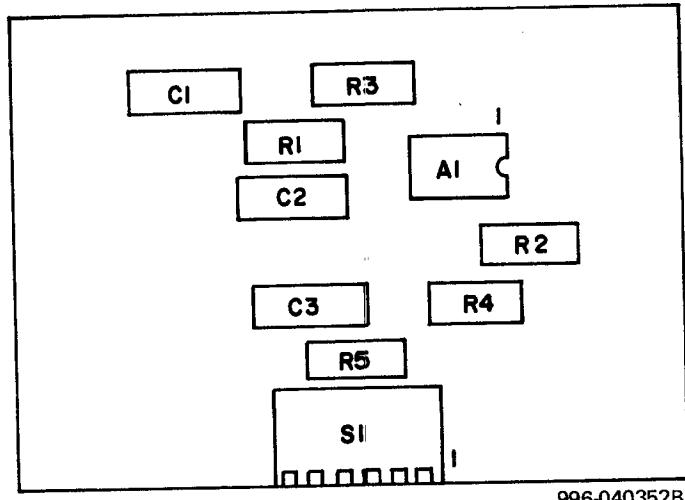
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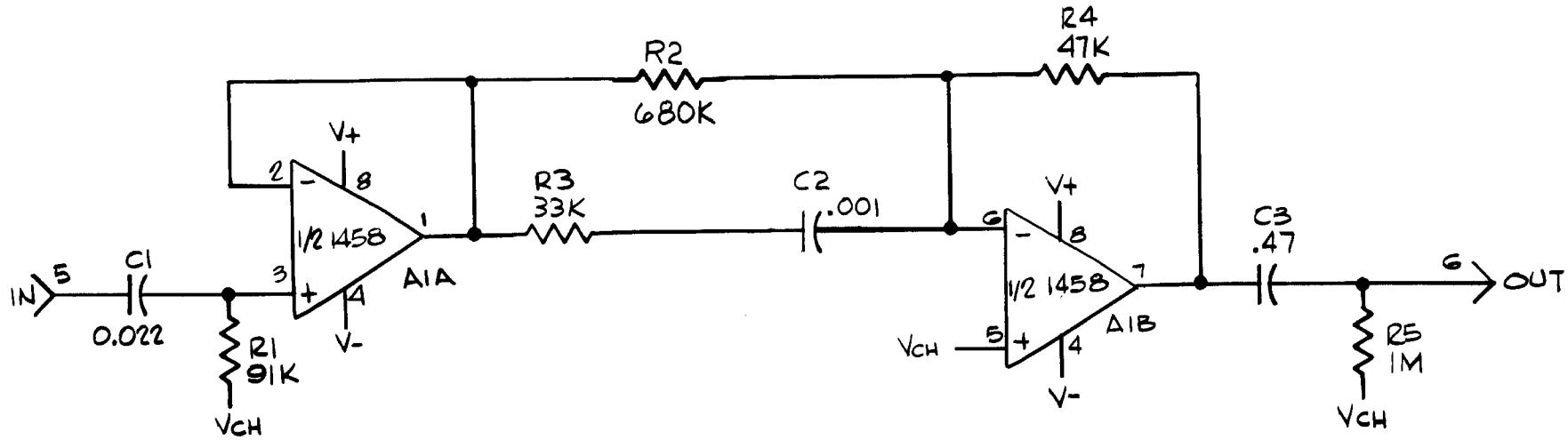
1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 10 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.
2. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P87 INDICATES IT IS PART OF BOARD 8. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.



NOTE:

**REFER TO THE REPLACEMENT PARTS
LIST IN SECTION 10 FOR THE PART
NUMBER AND DESCRIPTION OF
EACH REFERENCE DESIGNATOR.**





V_{CH} — 1
 V_+ — 4
 V_- — 3

SI

NOTES:

1. UNLESS OTHERWISE SPECIFIED -

ALL RESISTORS ARE IN OHMS $\frac{1}{4}W, \pm 5\%$ ALL CAPACITORS ARE IN MFD (μF)

LAST REF DES USED			
A	C	R	S
1	3	5	1

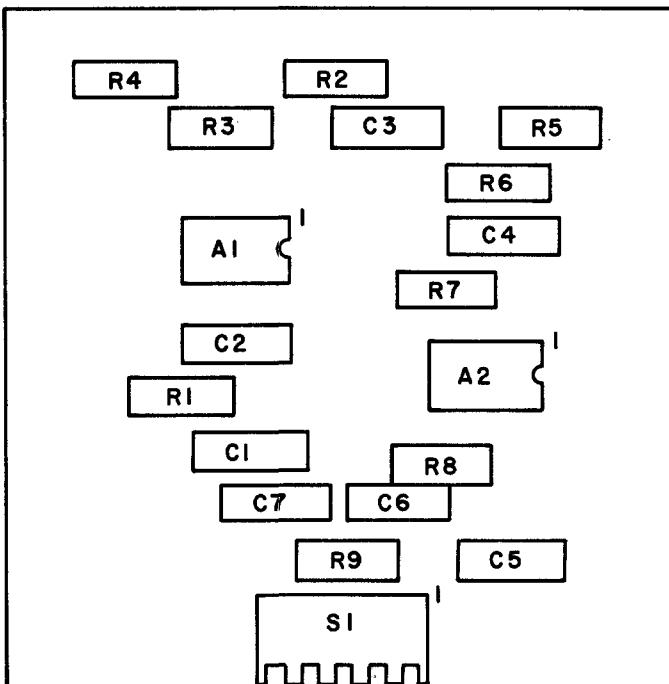
REVISIONS				
SYM	DESCRIPTION	E.O.	DATE	APPROVED
-	RELEASED FOR PRODUCTION	0192	6/21/76	<i>[Signature]</i>
A	CHANGED C3 FROM 0.47 μF TO 0.47M	JML	0233	8/10/76 <i>[Signature]</i>
B	CHANGED PER E.O. 0277	JML	0277	9/27/76 <i>[Signature]</i>

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE, FRACTIONS $\pm 1/64$ ANGLES $\pm 1/2^\circ$ 3 PLACE DECIMALS $\pm .005$ 2 PLACE DECIMALS $\pm .01$ 125 FINISH ON ALL SURFACES	DRAWN BY J.M.P. 5-76 CHECK W.J.A 6/3/76 GRP ENGR. <i>[Signature]</i> 6/3/76 REVIEW QC. <i>[Signature]</i> 6/3/76 SUPERVISOR <i>[Signature]</i> 6/3/76	moog MUSIC INC.	WILLIAMSVILLE, NEW YORK
DRILLED HOLE TOL .040-.125 DIA $\pm .002$ in .126-.228 DIA $\pm .003$ in .229-.500 DIA $\pm .004$ in .500-.750 DIA $\pm .005$ in	993-040350	203A	SIZE CODE IDENT
NEXT ASSY MODEL NO.	B		993-040349
APPLICATION	SCALE —	WT.	SHEET OF 1

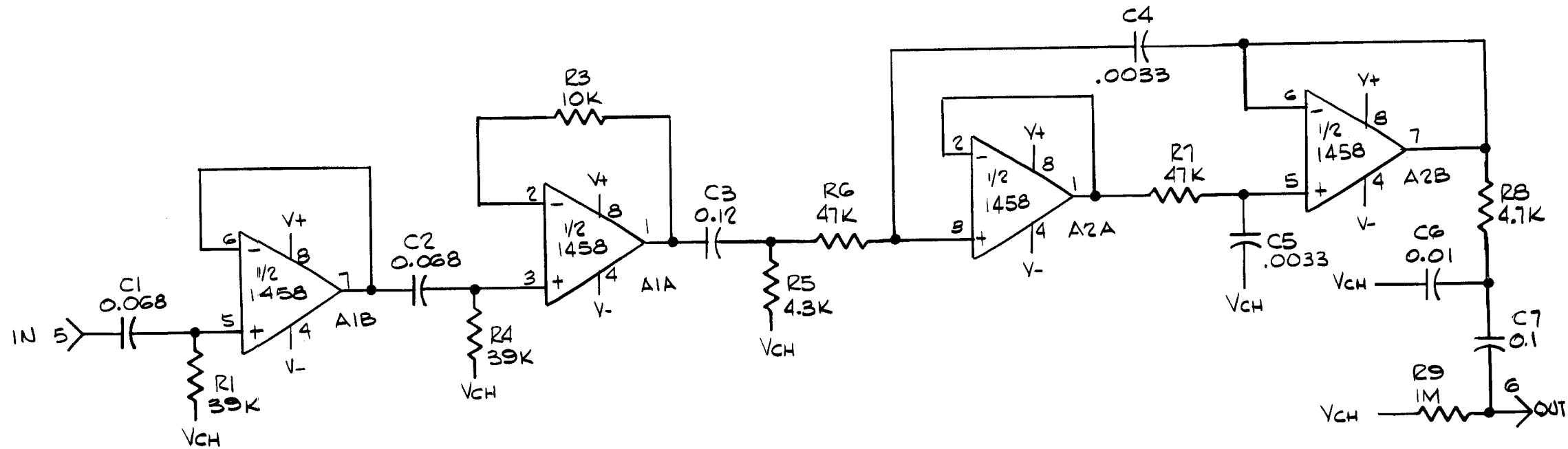
POLYMOOG SCHEMATIC
STRING FILTER #1

NOTES:

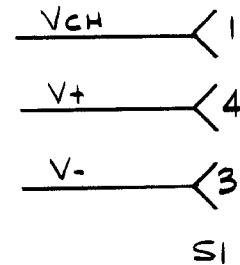
1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 10 FOR THE PART NUMBER AND DESCRIPTION OF EACH REFERENCE DESIGNATOR.
2. R2 DELETED ON LATER INSTRUMENTS.



996-040356A

NOTES:

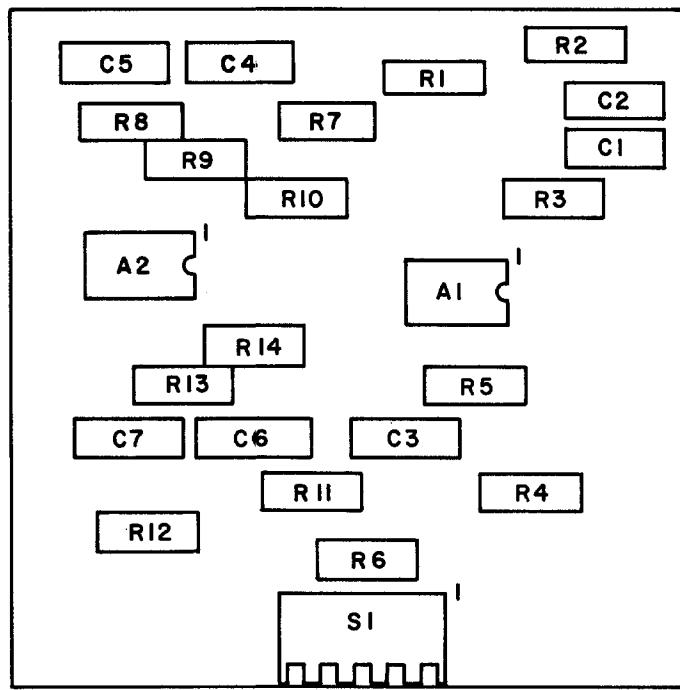
1. UNLESS OTHERWISE SPECIFIED -
 - ALL RESISTORS ARE 1/4W, $\pm 5\%$.
 - ALL CAPACITORS ARE MFD (uF)



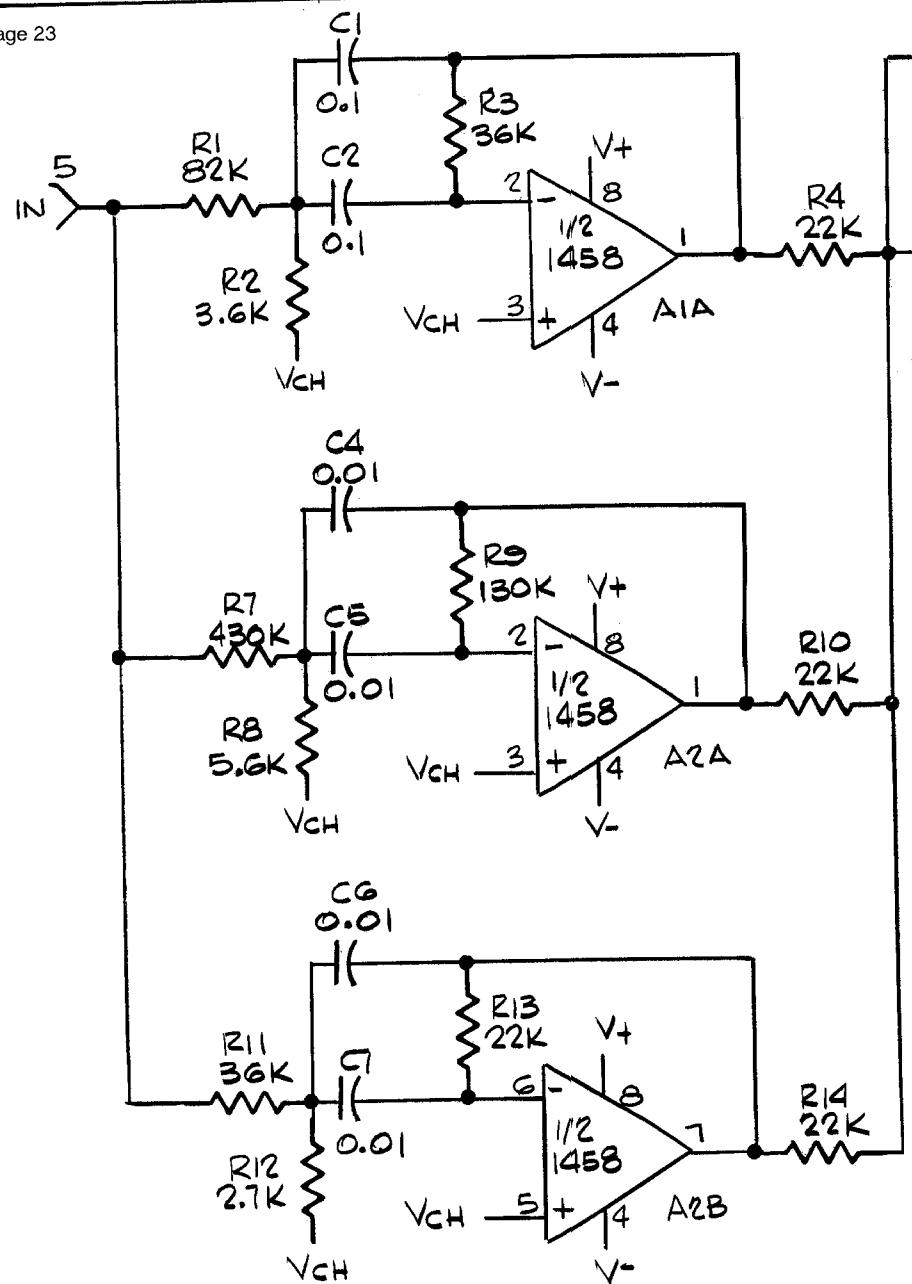
S1

NOTE:

REFER TO THE REPLACEMENT PARTS LIST IN SECTION 10 FOR THE PART NUMBER AND DESCRIPTION OF EACH REFERENCE DESIGNATOR.



996-040360A



REVISIONS				
SYM	DESCRIPTION	E O	DATE	APPROVED
-	RELEASED FOR PRODUCTION	0192	6/21/76	RB
A	CHANGE PER EC#OP33	JML	0233	7/26/76

FIL #1 G = -13
F = 140Hz
Q = 1.7

FIL #2 G = -17
F = 600Hz
Q = 2.4

FIL #3 G = -10
F = 2050Hz
Q = 1.5

LAST REF DES USED			
A	C	R	S
2	7	14	1

SI

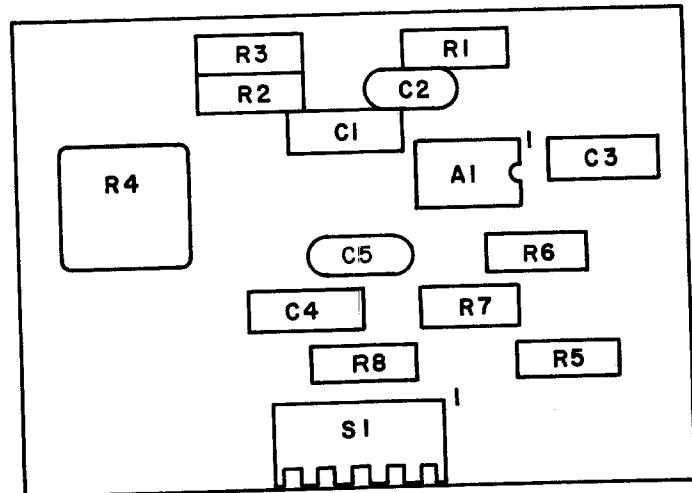
NOTES:

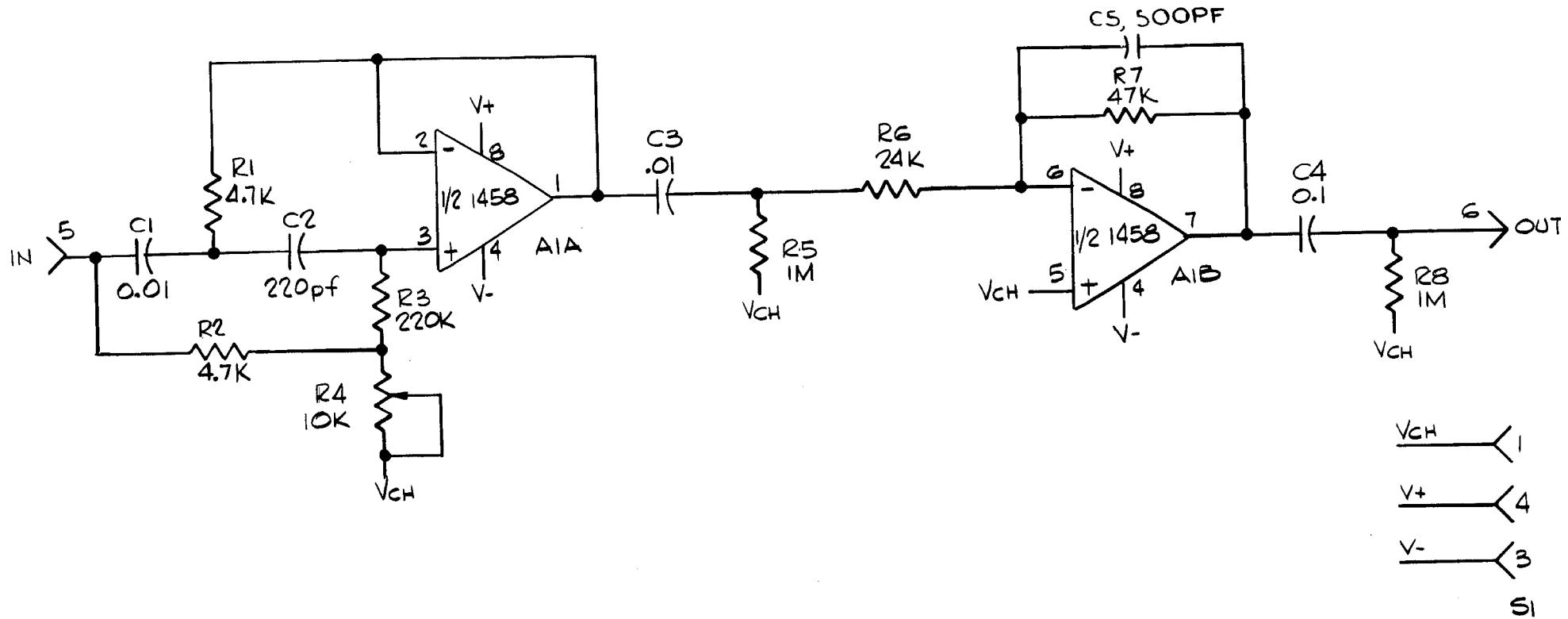
1. UNLESS OTHERWISE SPECIFIED -
ALL RESISTORS ARE IN OHMS $\frac{1}{4}W, \pm 5\%$
ALL CAPACITORS ARE IN MFD (μF)

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE: FRACTIONS $\pm \frac{1}{64}$ ANGLES $\pm 5^\circ$ 3 PLACE DECIMALS $\pm .005$ 2 PLACE DECIMALS $\pm .01$ 125 FINISH ON ALL SURFACES	DRAWN BY J.M.P. 5/76 CHECK W.J.A 6/19/76 GRP ENGR. 020 6/23/76 REVIEW QC 020 6/16/76 SUPERVISOR ACM 6/16/76 981-040358 NEXT ASSY MODEL NO.	moog MUSIC INC. WILLIAMSVILLE, NEW YORK	POLYMOOG SCHEMATIC ORGAN FILTER #3
	SIZE	CODE IDENT	993-040357
	B		
	APPLICATION	SCALE -	WT.
			SHEET 1 OF 1

NOTE:

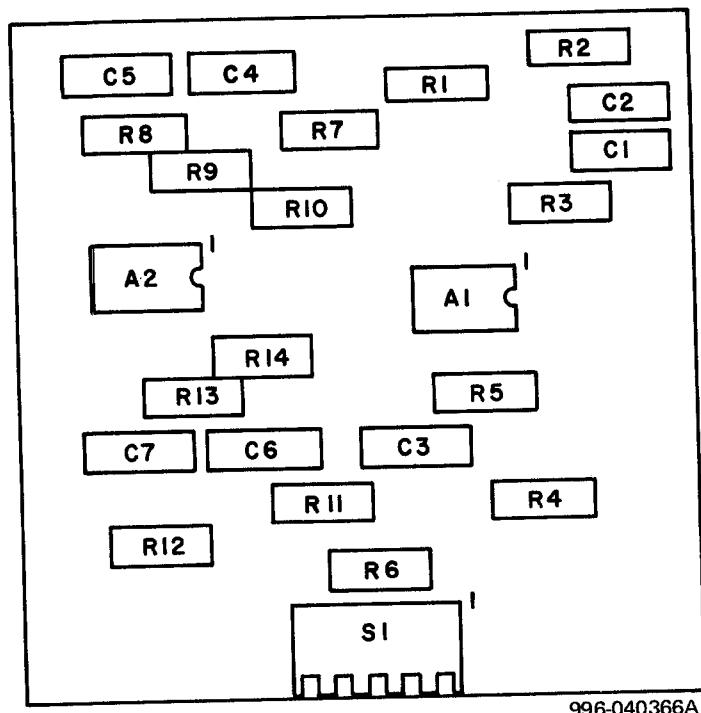
**REFER TO THE REPLACEMENT
PARTS LIST IN SECTION 10 FOR
THE PART NUMBER AND
DESCRIPTION OF EACH
REFERENCE DESIGNATOR.**



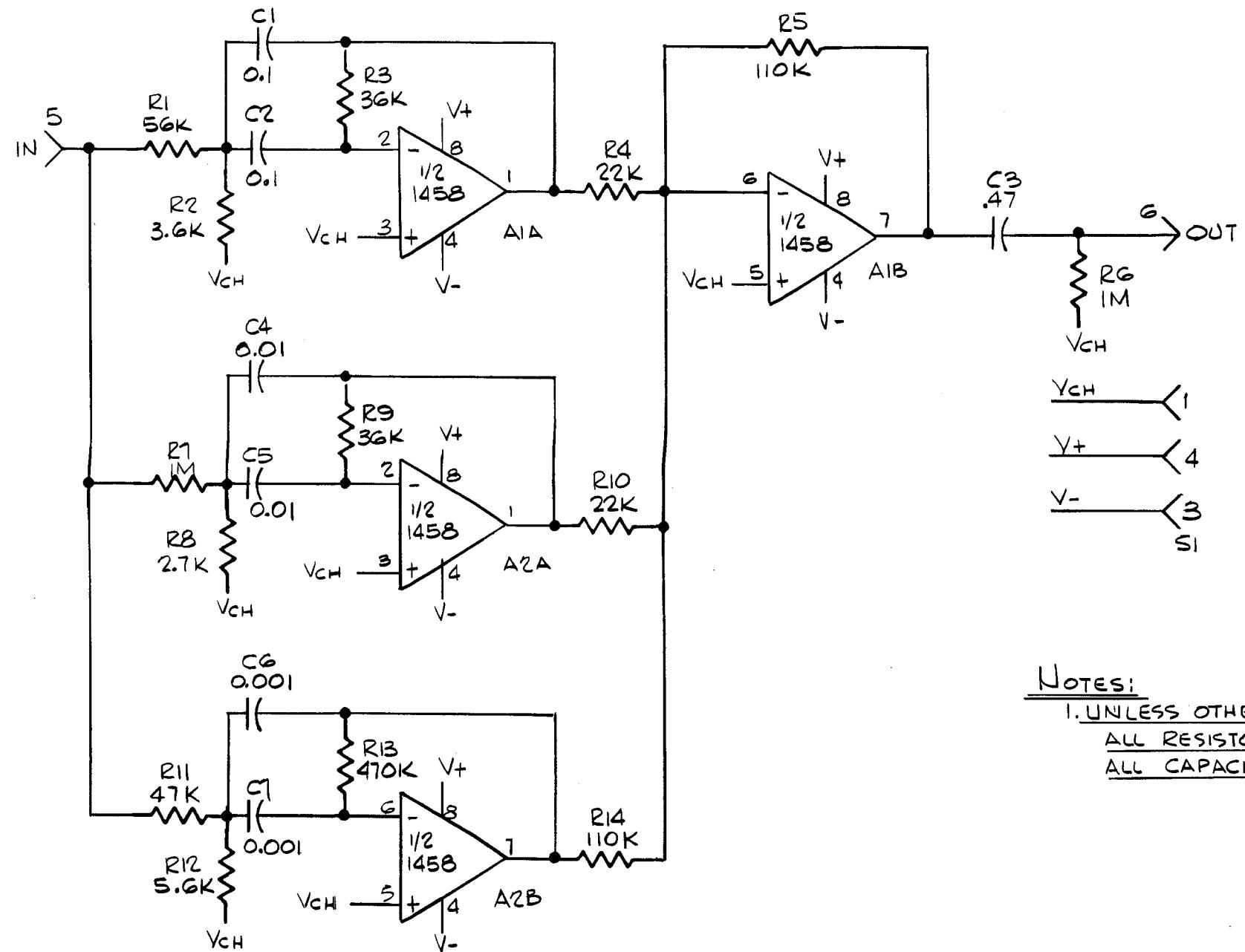
NOTES:UNLESS OTHERWISE SPECIFIED:ALL RESISTORS ARE IN OHMS $\frac{1}{4}W, \pm 5\%$.ALL CAPACITORS ARE IN MFD (μf)

NOTE:

**REFER TO THE REPLACEMENT
PARTS LIST IN SECTION 10 FOR
THE PART NUMBER AND
DESCRIPTION OF EACH
REFERENCE DESIGNATOR.**



996-040366A



FIL #1 G = -10
 F = 146 Hz
 Q = 1.7

FIL #2 G = -35
 F = 1630 Hz
 Q = 1.8

FIL #3 G = 0
 F = 3K Hz
 Q = 2.7

VCH 1

V+ 4

V- 3

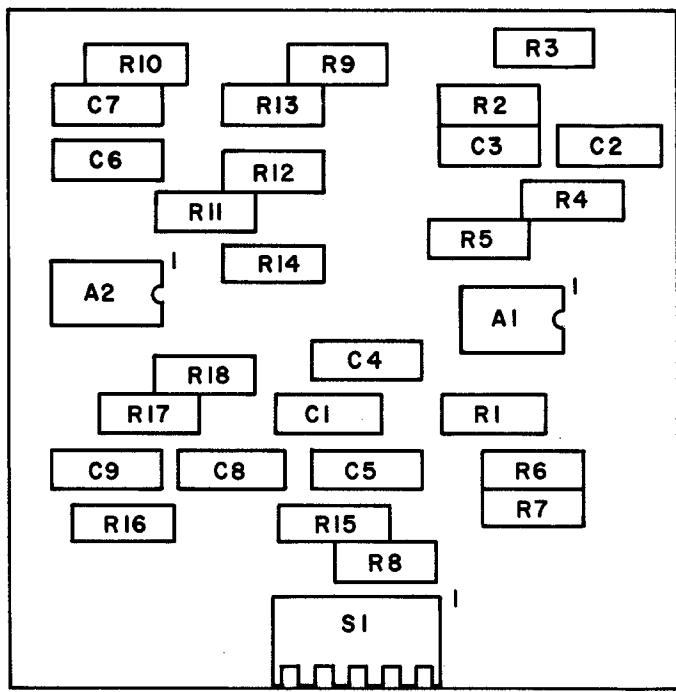
SI

NOTES:

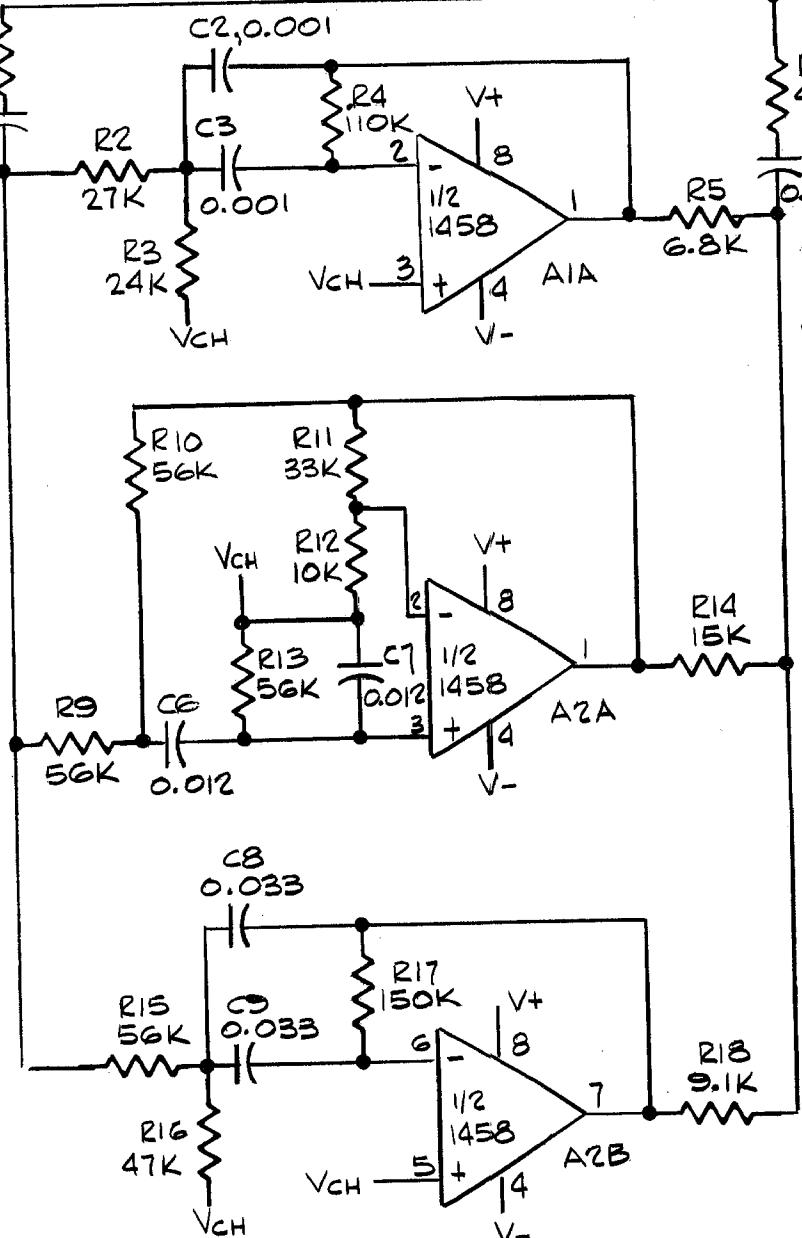
1. UNLESS OTHERWISE SPECIFIED -
 ALL RESISTORS ARE IN OHMS $\frac{1}{4}W, \pm 5\%$
 ALL CAPACITORS ARE IN MFD (μF)

NOTE:

**REFER TO THE REPLACEMENT
PARTS LIST IN SECTION 10 FOR
THE PART NUMBER AND
DESCRIPTION OF EACH
REFERENCE DESIGNATOR.**



996-040370



REVISIONS				
SYM	DESCRIPTION	E O	DATE	APPROVED
-	RELEASED FOR PRODUCTION	0192	6/1/16	JB

FIL #1 G = 6.4
F = 4.2 kHz
Q = 1.5

FIL #2 G = 15
F = 450 Hz
Q = 2.2

FIL #3 G = 4.4
F = 90 Hz
Q = 1.3

NOTES:
UNLESS OTHERWISE SPECIFIED -
ALL RESISTORS ARE IN OHMS 1/4W, ±5%
ALL CAPACITORS ARE IN MFD (μF)

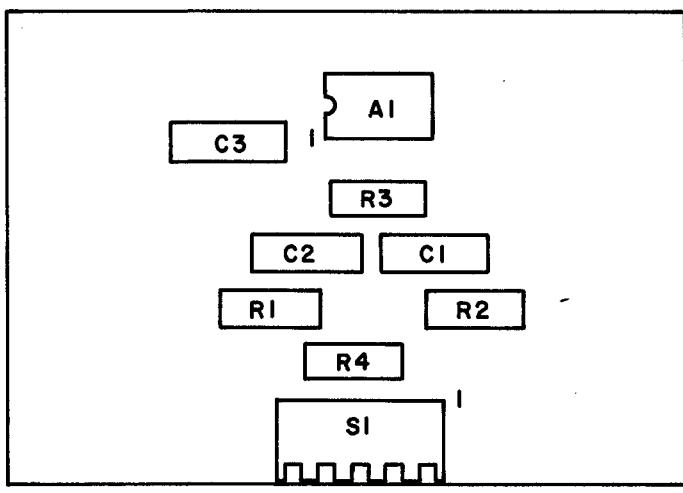
LAST REF Des Used			
A	C	R	S
2	9	18	1

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE: FRACTIONS ± 1/64 ANGLES ± 1/2° 3 PLACE DECIMALS ± .005 2 PLACE DECIMALS ± .01 ✓ FINISH ON ALL SURFACES			
DRAWN BY	J.M.P.	5/76	 WILLIAMSVILLE, NEW YORK
CHECK	W.J.A.	6/19/76	
GRP ENGR.	✓	6/23/76	
REVIEW QC.	✓	6/1/76	
SUPERVISOR	ADM	6/16	
981-040368	203A	SIZE	CODE IDENT
NEXT ASSY	MODEL NO.	B	993-040367
APPLICATION		SCALE —	WT.
			SHEET 1 OF 1

POLYMOOG SCHEMATIC
CLAVINET FILTER #6

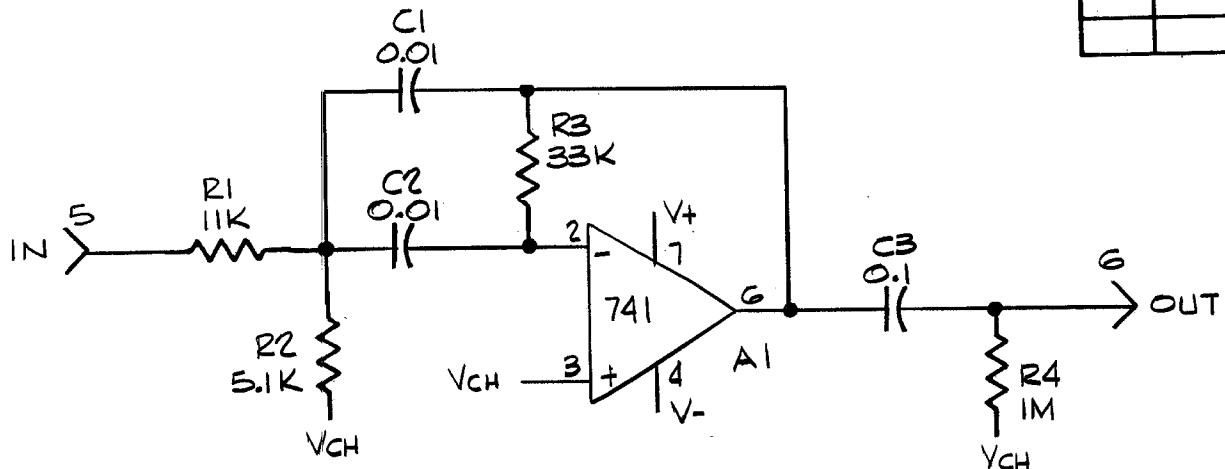
NOTE:

**REFER TO THE REPLACEMENT
PARTS LIST IN SECTION 10 FOR
THE PART NUMBER AND
DESCRIPTION OF EACH
REFERENCE DESIGNATOR.**



REVISIONS

SYM	DESCRIPTION	E O	DATE	APPROVED
-	RELEASED FOR PRODUCTION	0192	6/1/76	WB



V_{CH} ————— 1
 V₊ ————— 4
 V₋ ————— 3
 S1

NOTES:

1. UNLESS OTHERWISE SPECIFIED -

ALL RESISTORS ARE IN OHMS $\frac{1}{4}$ W, $\pm 5\%$.ALL CAPACITORS ARE IN MFD (μ F)

LAST REF DES USED			
A	C	R	S
1	3	4	1

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
DRAWN BY J.M.P. 5/76			
CHECK W.J.A. 6/19/76			
GRP ENGR. 6/23/76			
REVIEW QC. 6/29/76			
SUPERVISOR 6/29/76			
981-040312 203A	SIZE B	CODE IDENT	993-040371
NEXT ASSY	WT.		
APPLICATION	WT.		

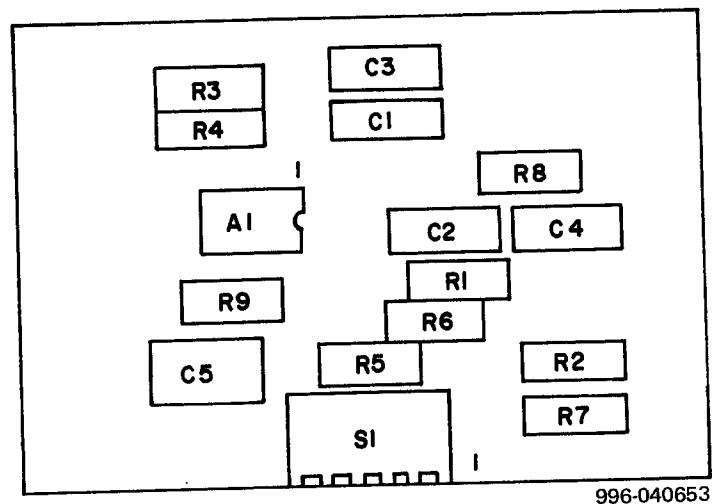
UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCE: FRACTIONS $\pm 1/64$
 ANGLES $\pm 1/2^\circ$
 3 PLACE DECIMALS $\pm .005$
 2 PLACE DECIMALS $\pm .01$
 125 FINISH ON ALL SURFACES
 DRILLED HOLE TOL
 .040-.125 DIA $\pm .002$ $\pm .001$
 .126-.228 DIA $\pm .003$ $\pm .001$
 .229-.500 DIA $\pm .004$ $\pm .001$
 .500-.750 DIA $\pm .005$ $\pm .001$

moog
 MUSIC INC. WILLIAMSVILLE, NEW YORK

POLYMOOG SCHEMATIC
 VIBES FILTER #7

NOTE:

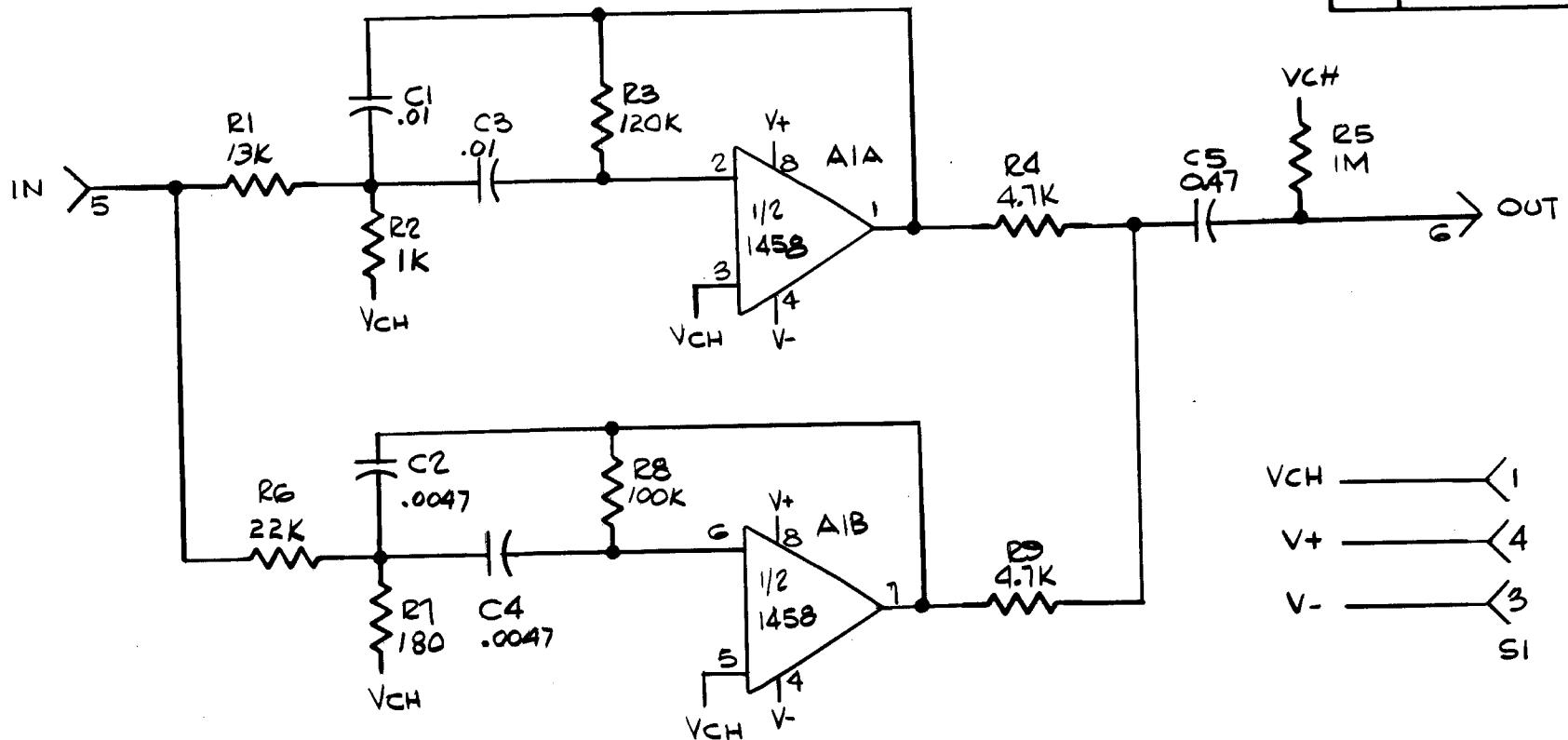
**REFER TO THE REPLACEMENT PARTS
LIST IN SECTION 10 FOR THE PART
NUMBER AND DESCRIPTION OF
EACH REFERENCE DESIGNATOR.**



996-040653

REVISIONS

SYM	DESCRIPTION	E.O	DATE	APPROVED
-	RELEASED FOR PRODUCTION	0233	9/76	✓



VCH ————— 1
 V+ ————— 4
 V- ————— 3
 S1

NOTES:

1. UNLESS OTHERWISE SPECIFIED
 a) ALL RESISTORS ARE IN OHMS $1/4\text{W}$, $\pm 5\%$
 b) ALL CAPACITORS ARE IN MFD (μF)

LAST REF DES USED			
A	C	R	S
1	5	9	1

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
DRAWN BY	J.M.P. 9-76	CHECK W.J.A. 10/76	WILLIAMSVILLE, NEW YORK
CHECK		GRP ENGR. 10/12/76	moog
REVIEW QC.	10/12/76	SUPERVISOR 10/12/76	MUSIC INC.
DRILLED HOLE TOL	981-040651	NEXT ASSY 203A	993-040650
.040-.125 DIA $\pm .002$ in		MODEL NO.	
.126-.228 DIA $\pm .003$ in		APPLICATION	WT.
.229-.500 DIA $\pm .005$ in		SCALE	SHEET 1 OF 1
.500-.750 DIA $\pm .005$ in			

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCE FRACTIONS $\pm 1/64$
 ANGLES $\pm 1/2^\circ$
 3 PLACE DECIMALS $\pm .005$
 2 PLACE DECIMALS $\pm .01$
 125 FINISH ON ALL SURFACES

DRILLED HOLE TOL
 .040-.125 DIA $\pm .002$ in
 .126-.228 DIA $\pm .003$ in
 .229-.500 DIA $\pm .005$ in
 .500-.750 DIA $\pm .005$ in

POLYMOOG SCHEMATIC
MODE FILTER FOR BRASS

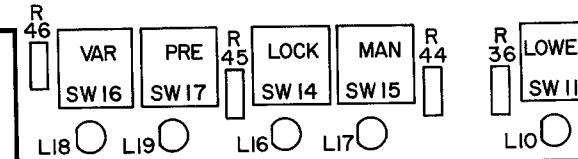
INTERACTING CONTROLS

ADJUST	ADJUST
SECOND	FIRST
-5.5 VDC	+4.85 VDC
ADJ R75	ADJ R71

2

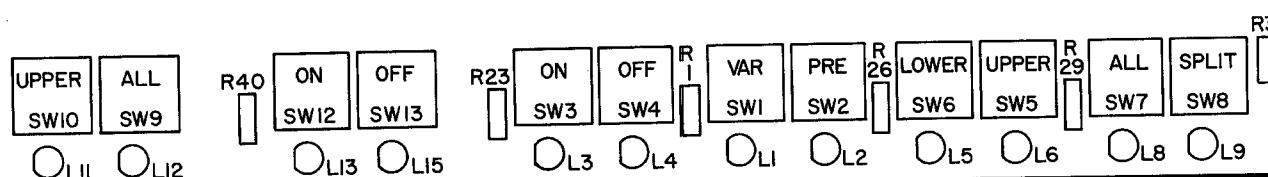
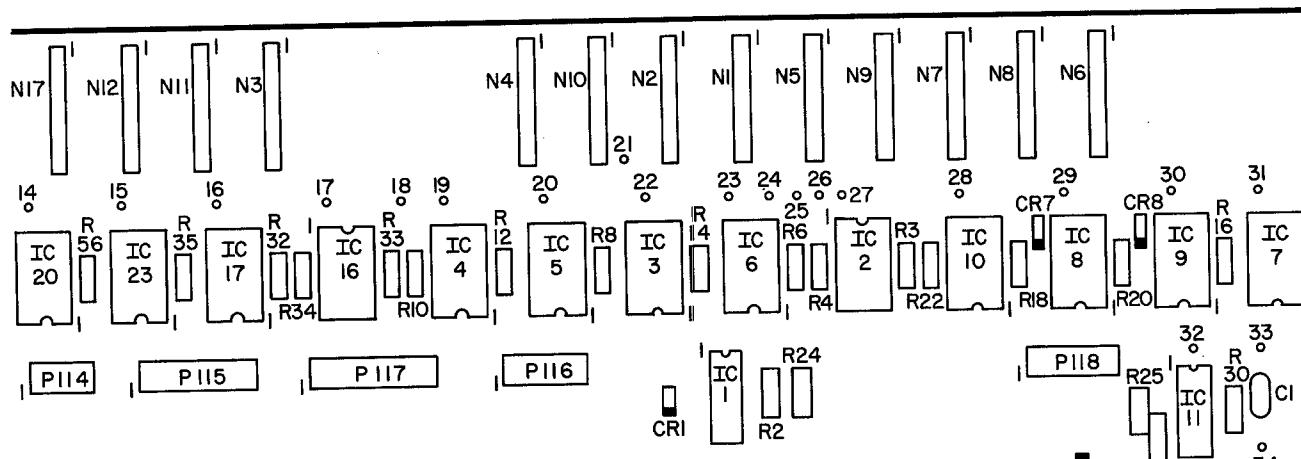
CAUTION:
**DO NOT OPERATE OR
TROUBLESHOOT
BOARD WITHOUT CP1
IN PLACE.**

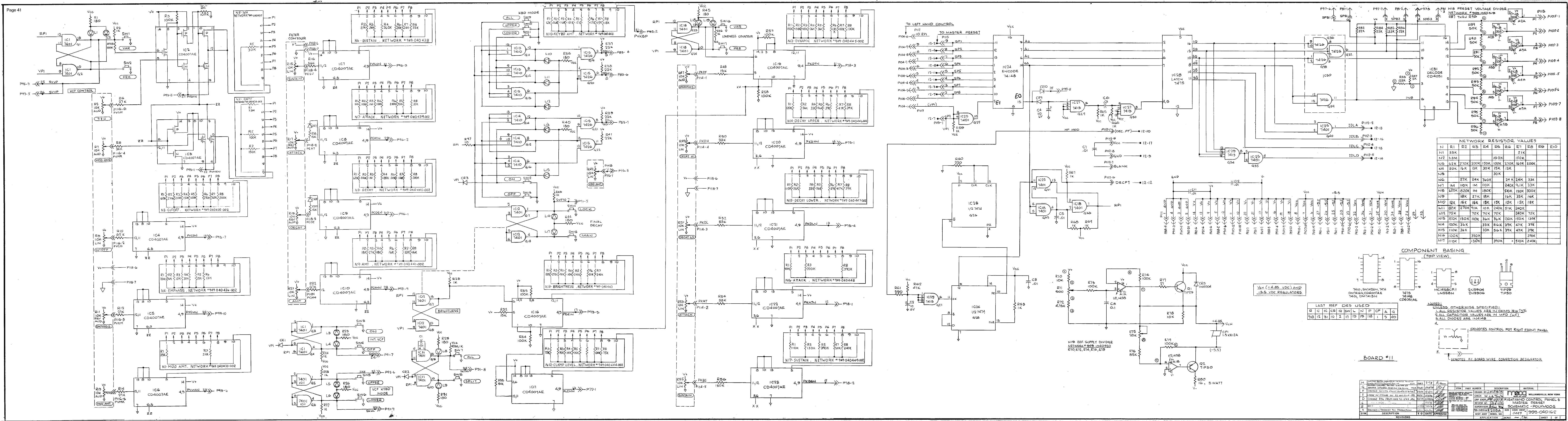
3



NOTE

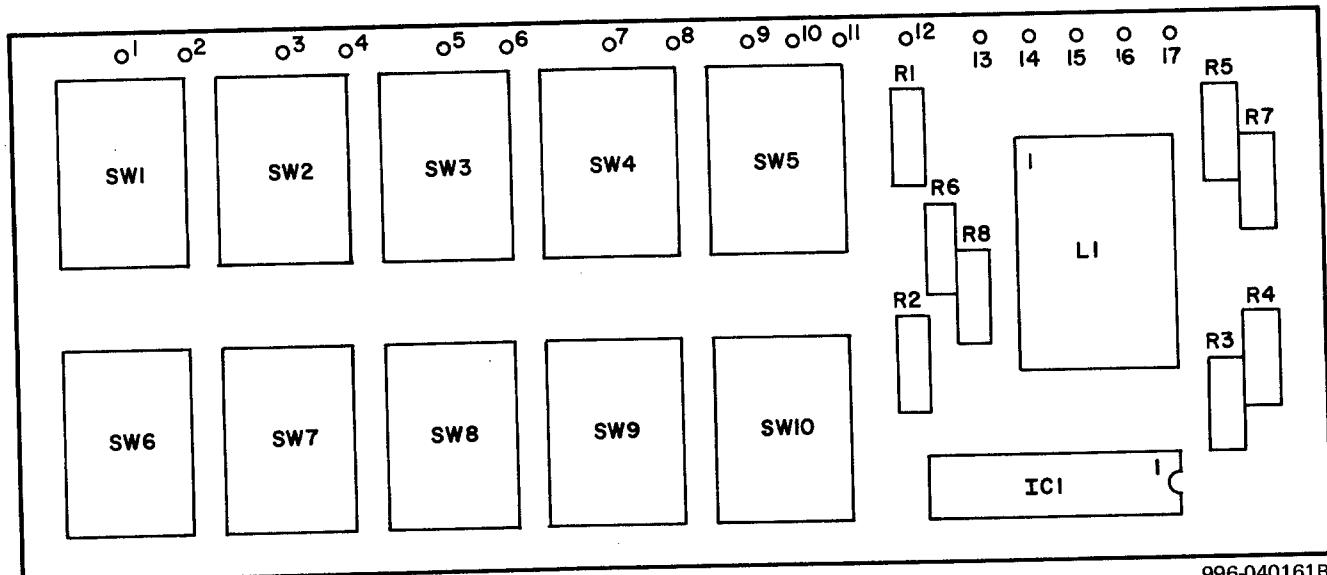
REFER TO THE REPLACEMENT PARTS LIST IN SECTION 6 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.





NOTES:

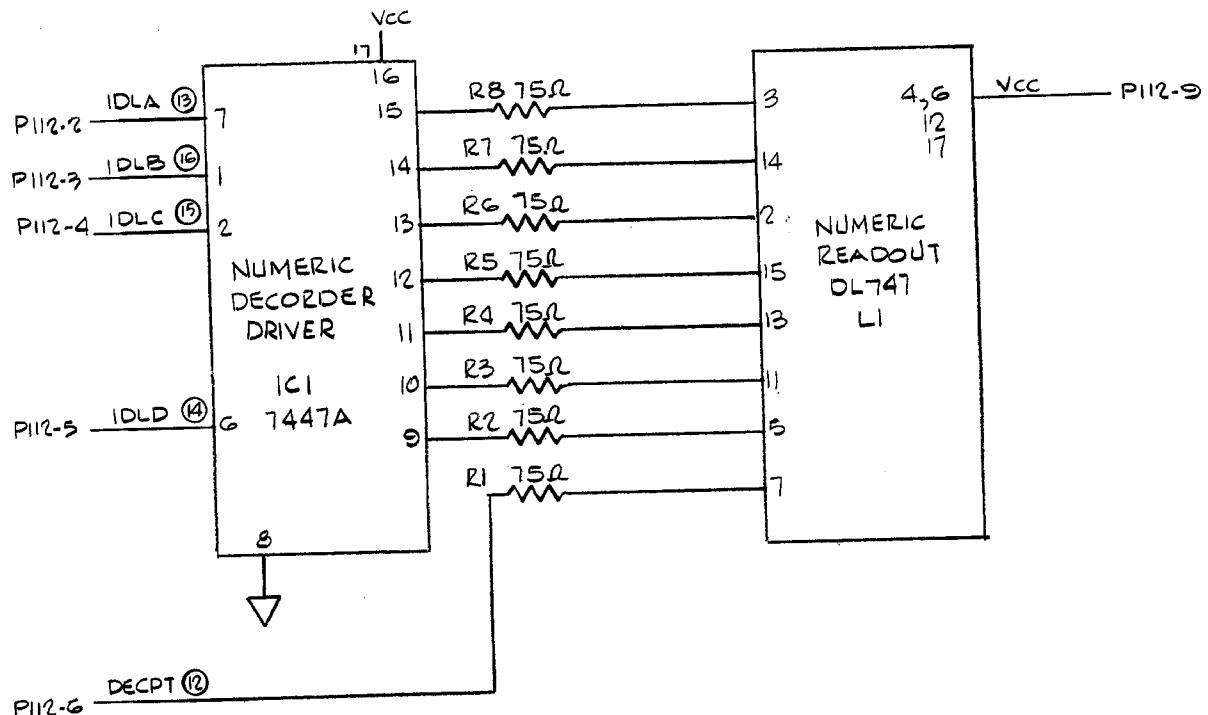
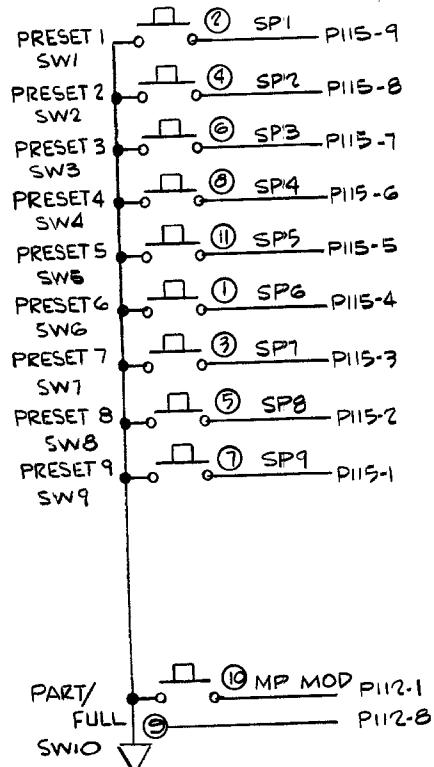
1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 6 FOR THE PART NUMBER AND DESCRIPTION OF EACH REFERENCE DESIGNATOR.
2. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P115 INDICATES IT IS PART OF BOARD 11. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.



996-040161B

REVISIONS				
SYM	DESCRIPTION	E.O	DATE	APPROVED
A	RELEASED FOR PRODUCTION	W.J.A	0192	3/16/74

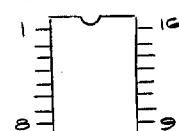
MODE SELECTOR SWITCHES



NOTES
 UNLESS OTHERWISE SPECIFIED-
 1. ALL RESISTOR VALUES ARE IN OHMS $\frac{1}{4}$ W, $\pm 5\%$.
 2. O DENOTES WIRE NUMBER

LAST REF DES USED			
R	SW	IC	L
8	10	1	1

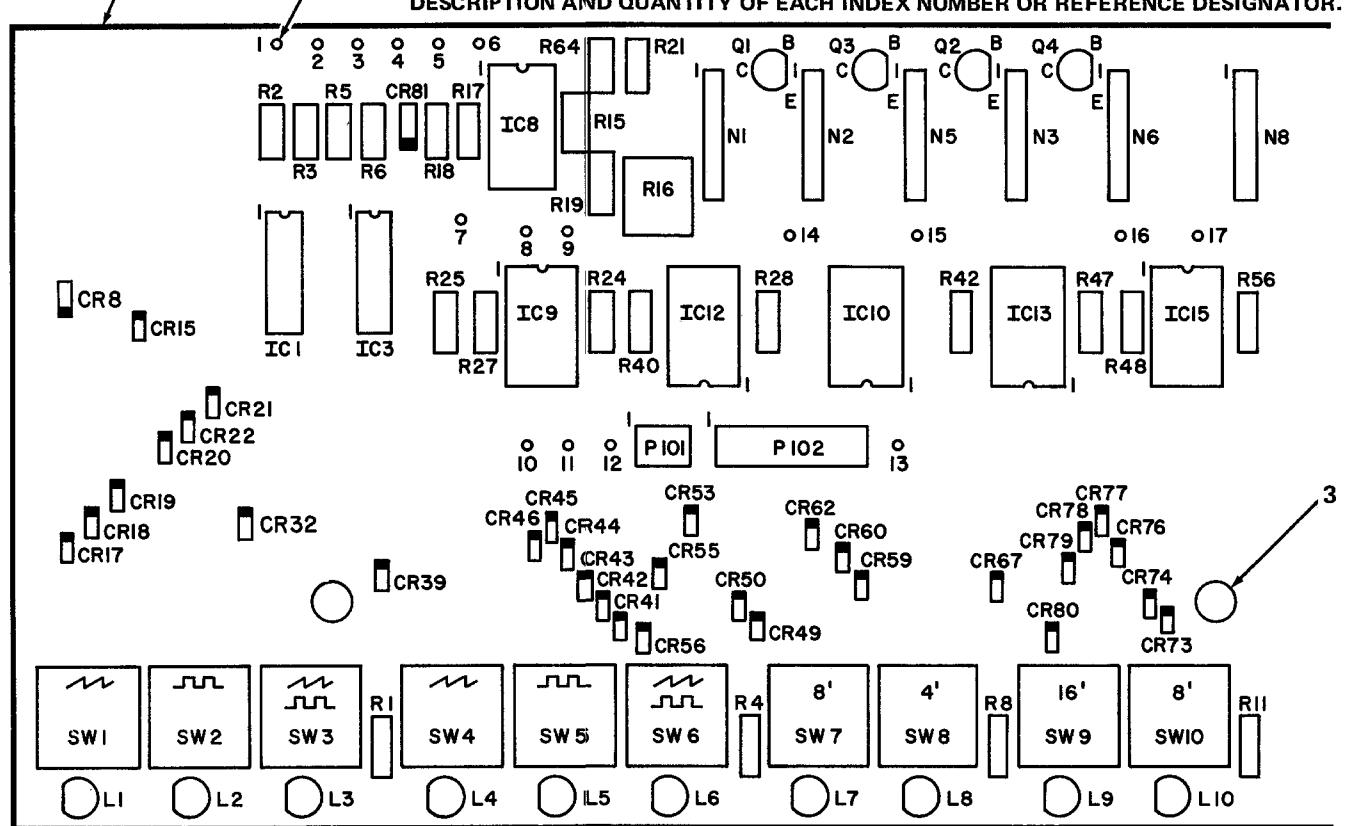
BOARD #12



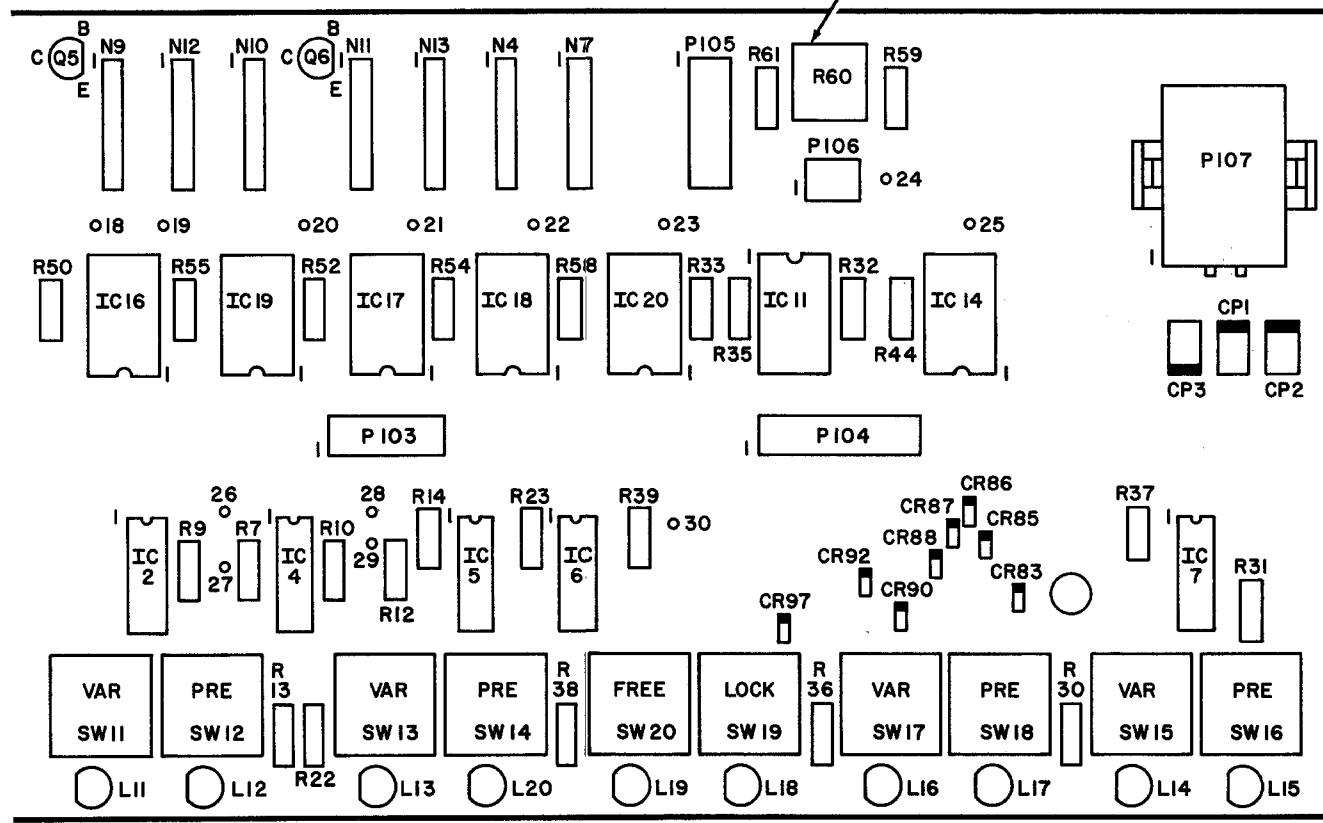
DL747
7447A

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE: FRACTIONS = 1/64 ANGLES = 1 DEGREE 3 PLACE DECIMALS = .005 2 PLACE DECIMALS = .01 FINISH ON ALL SURFACES	DRAWN BY W.J.A. 8/23/75 CHECK <i>MB</i> 3/16/76 GRP ENGR. <i>Acu</i> 5/14/76 REVIEW QC. <i>MB</i> 5/14/76 SUPERVISOR <i>MB</i> 5/14/76 561-040159 203A NEXT ASSY MODEL NO. C APPLICATION	WILLIAMSVILLE, NEW YORK moog MUSIC INC MODE SELECTOR CONTROL SCHEMATIC, POLYMOOG 993-040158	
	SCALE -	WT. -	SHEET 1 OF 1

NOTE: REFER TO THE REPLACEMENT PARTS LIST IN SECTION 6 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.

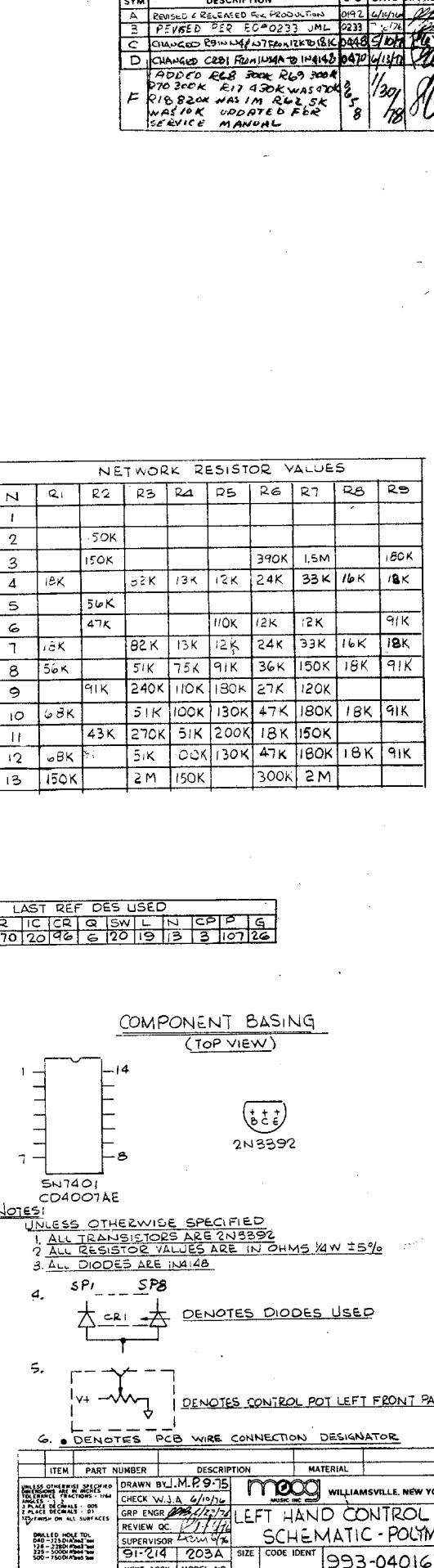
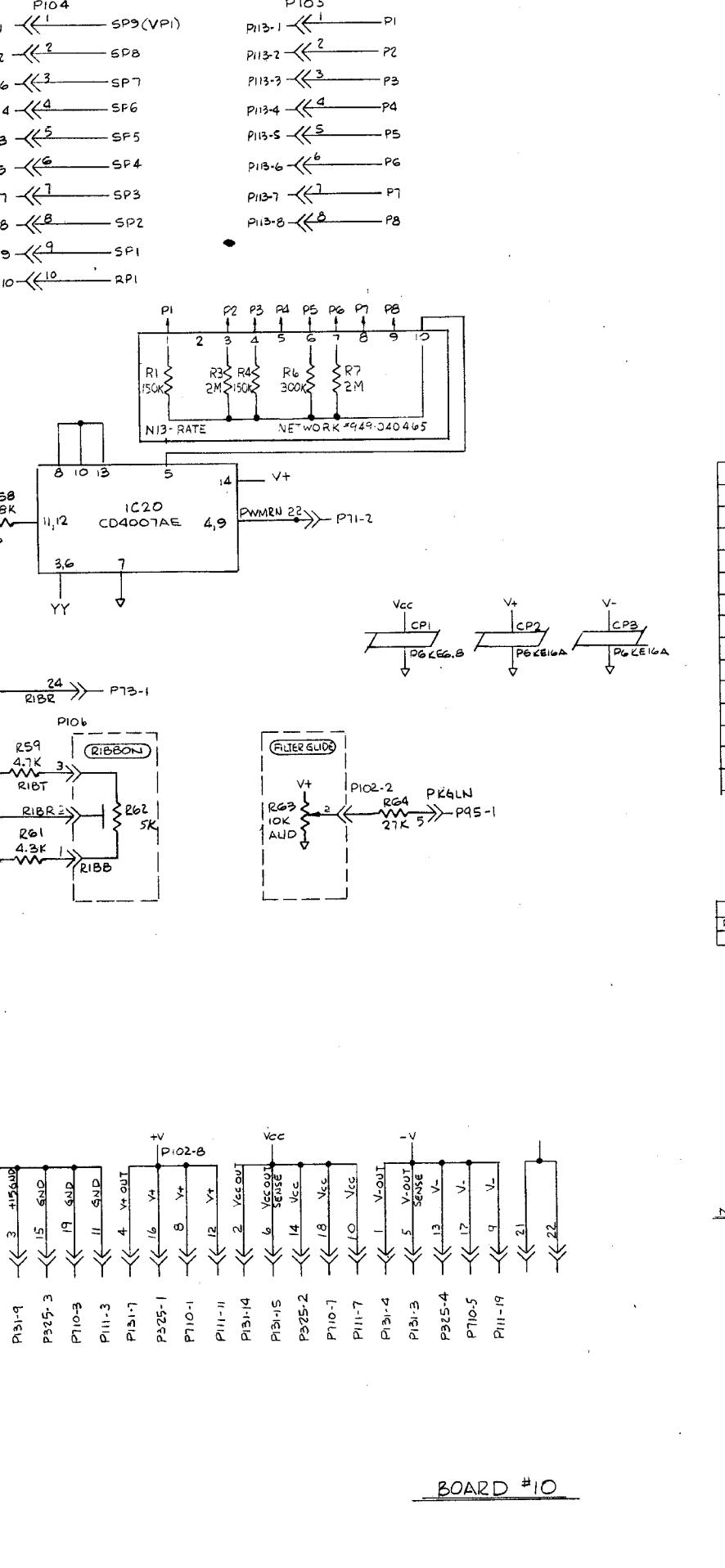
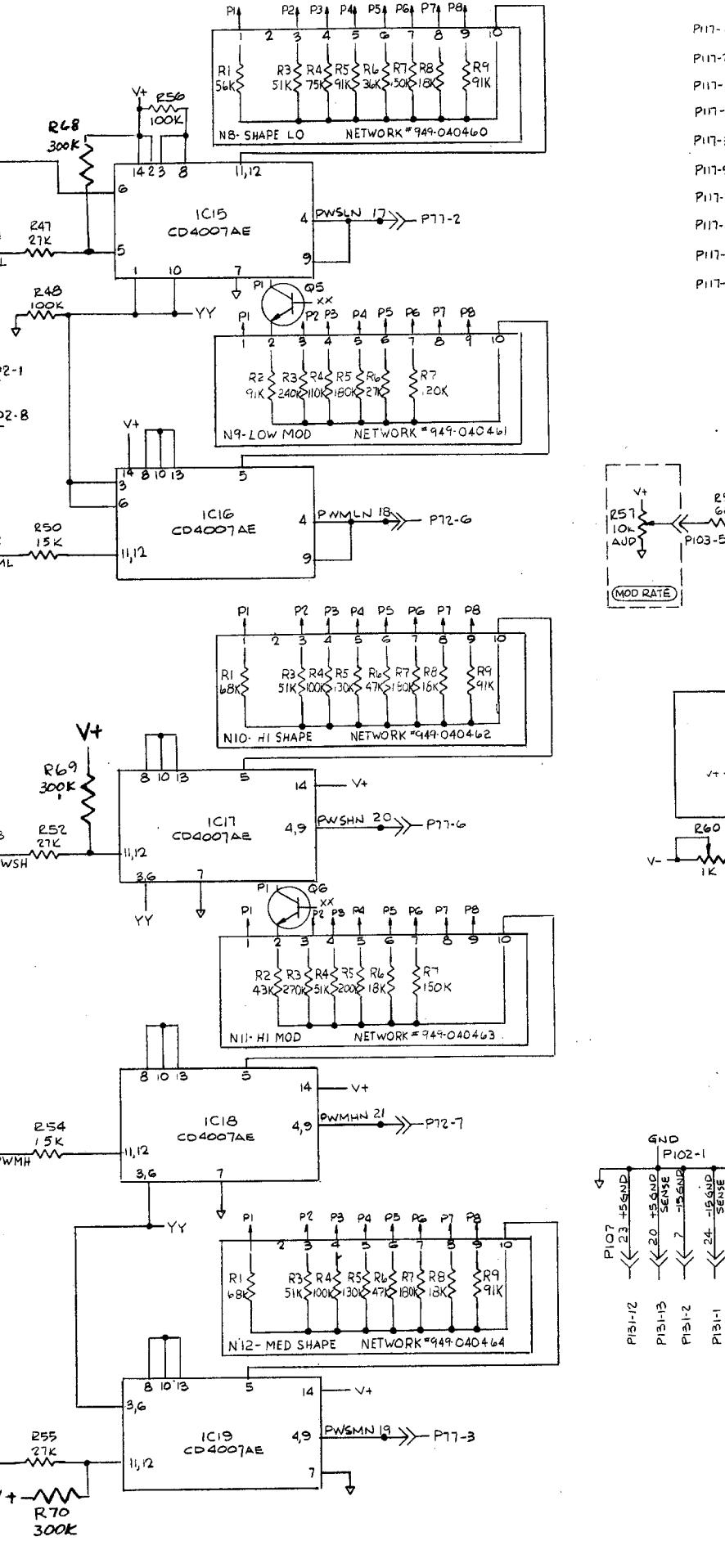
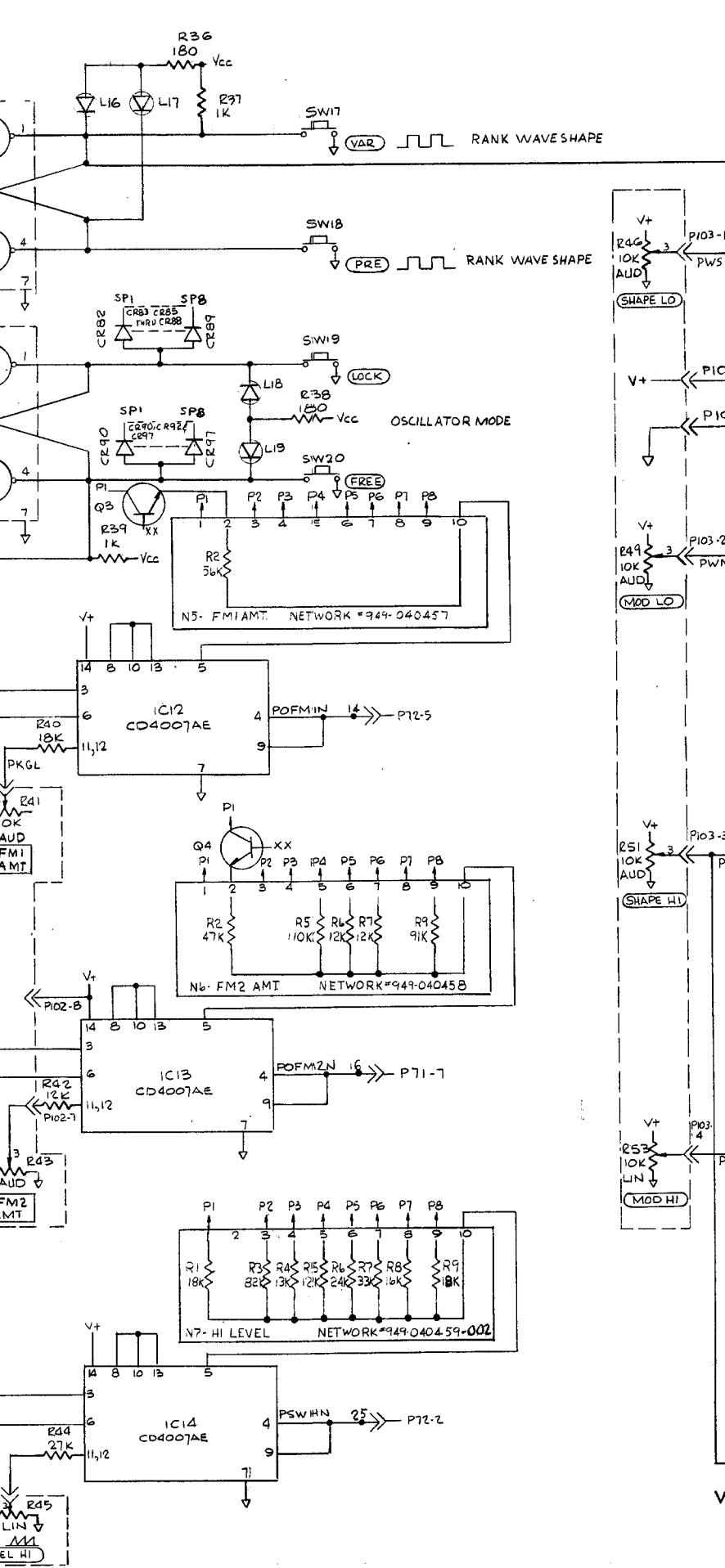
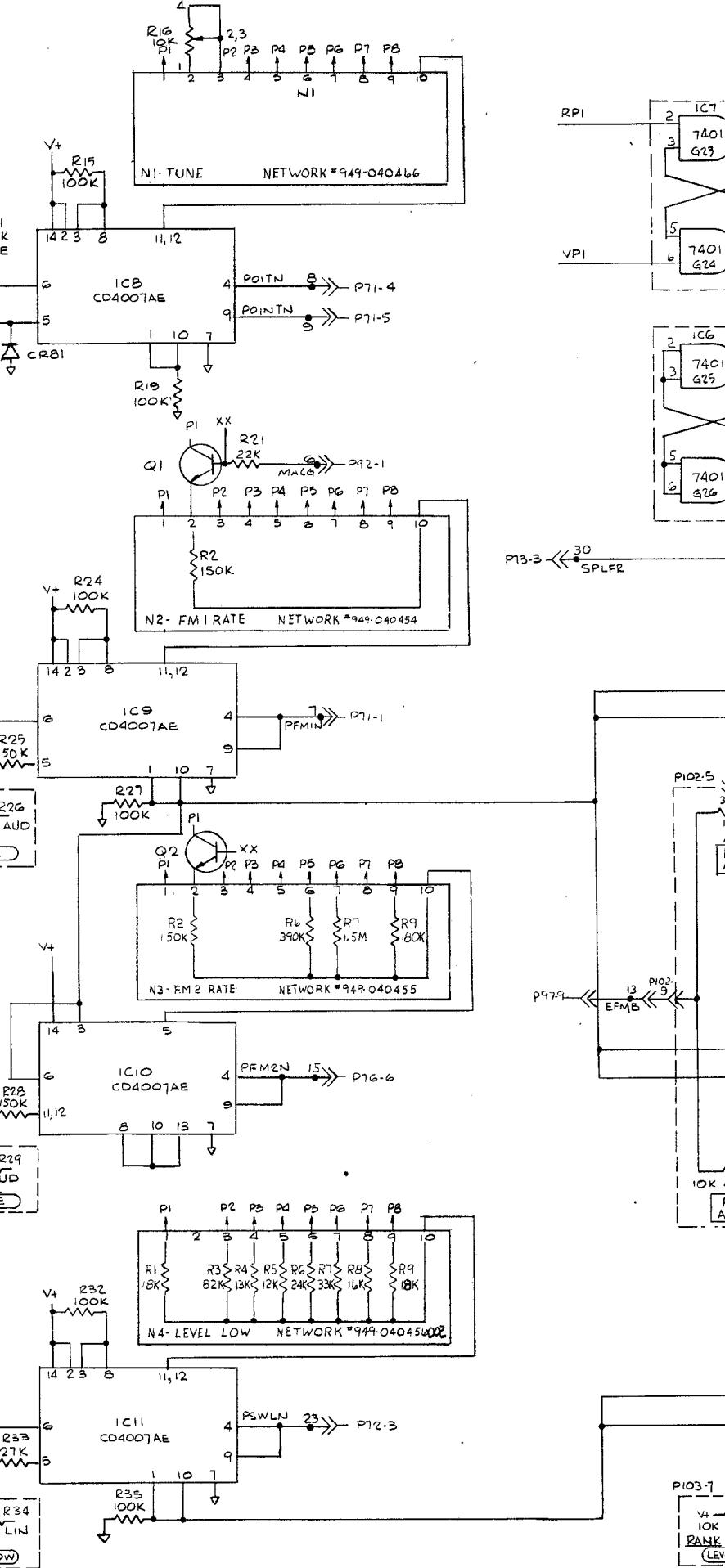
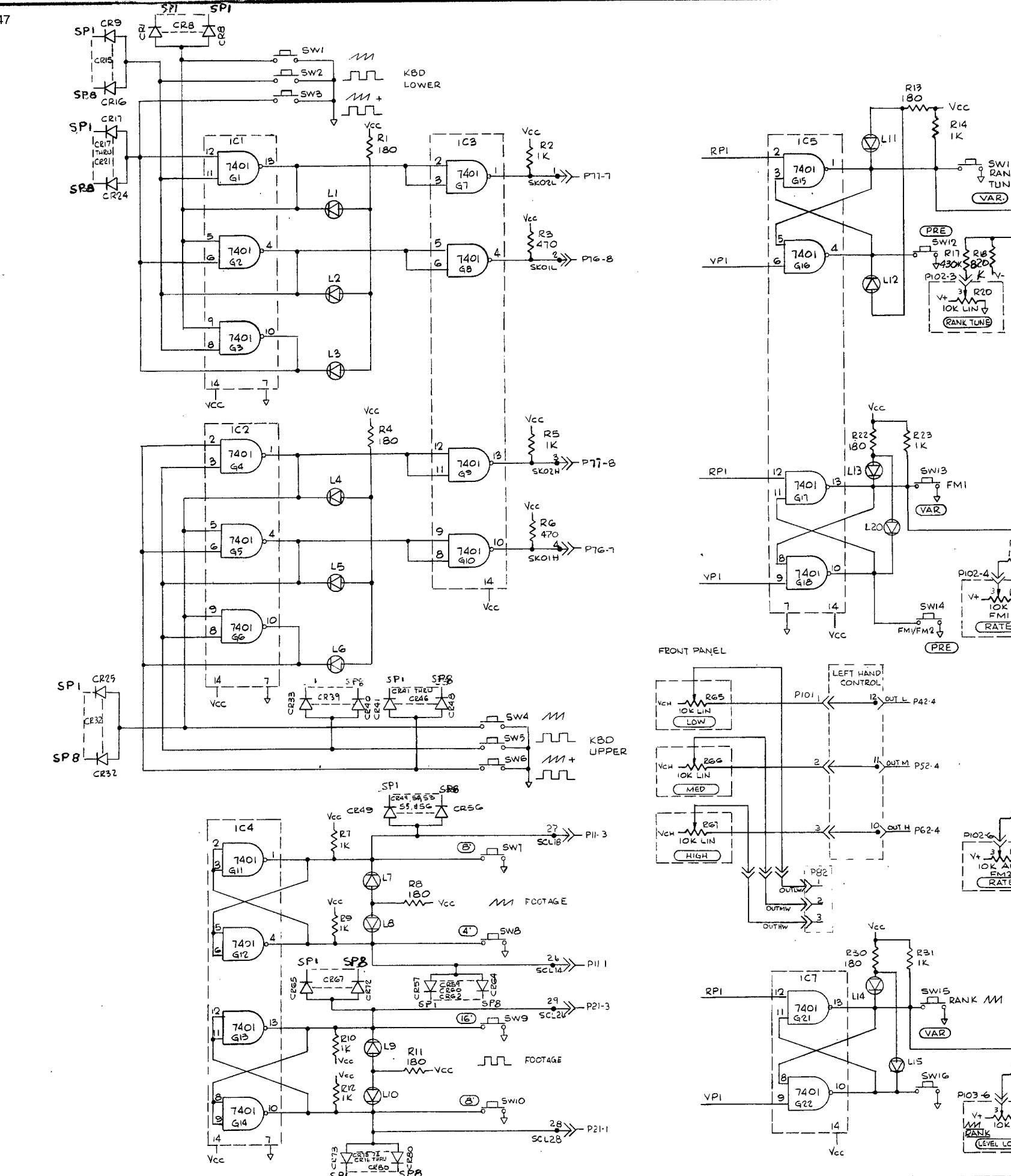


PITCH CONTROLLER CENTER ADJ R60



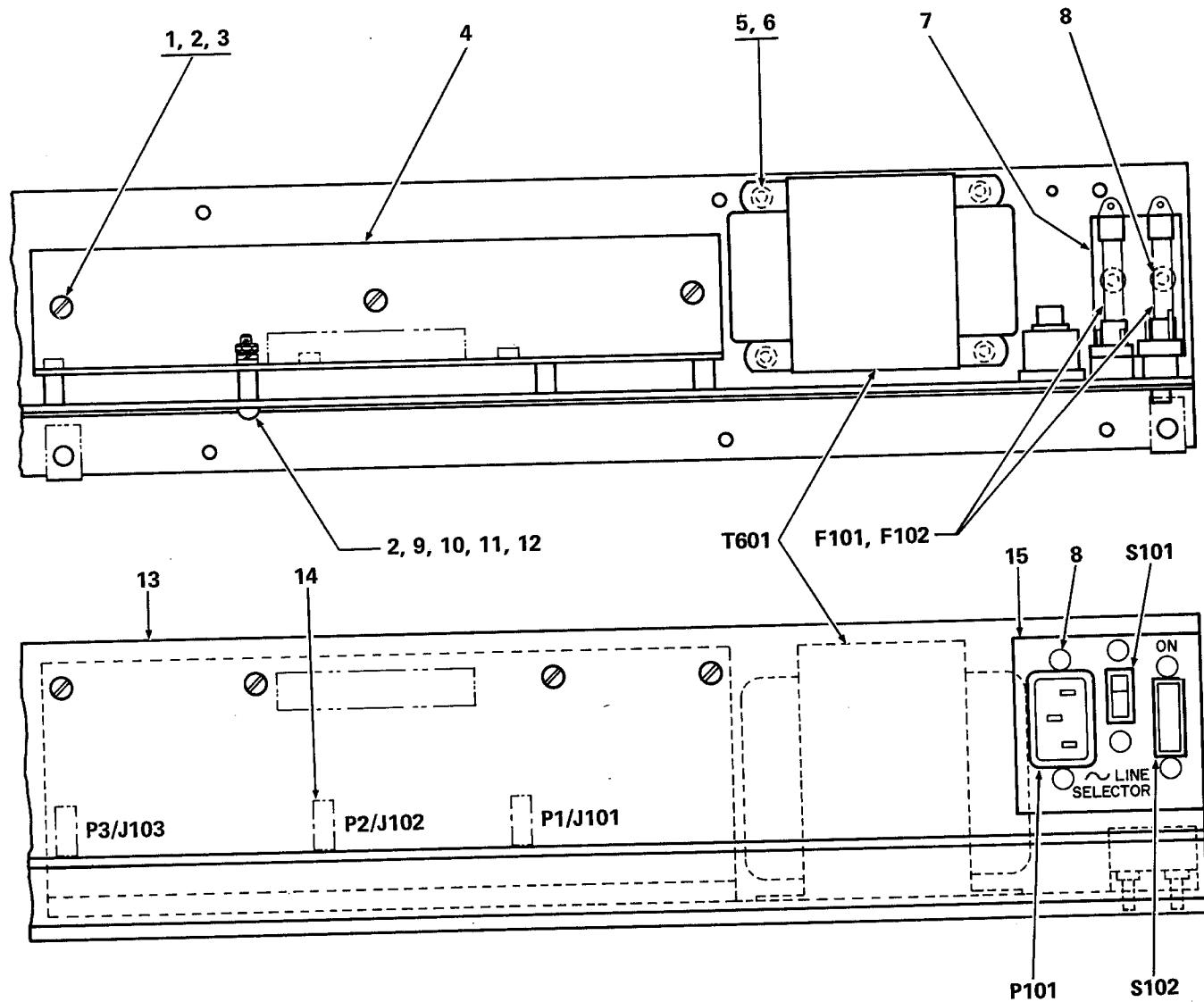
CAUTION:

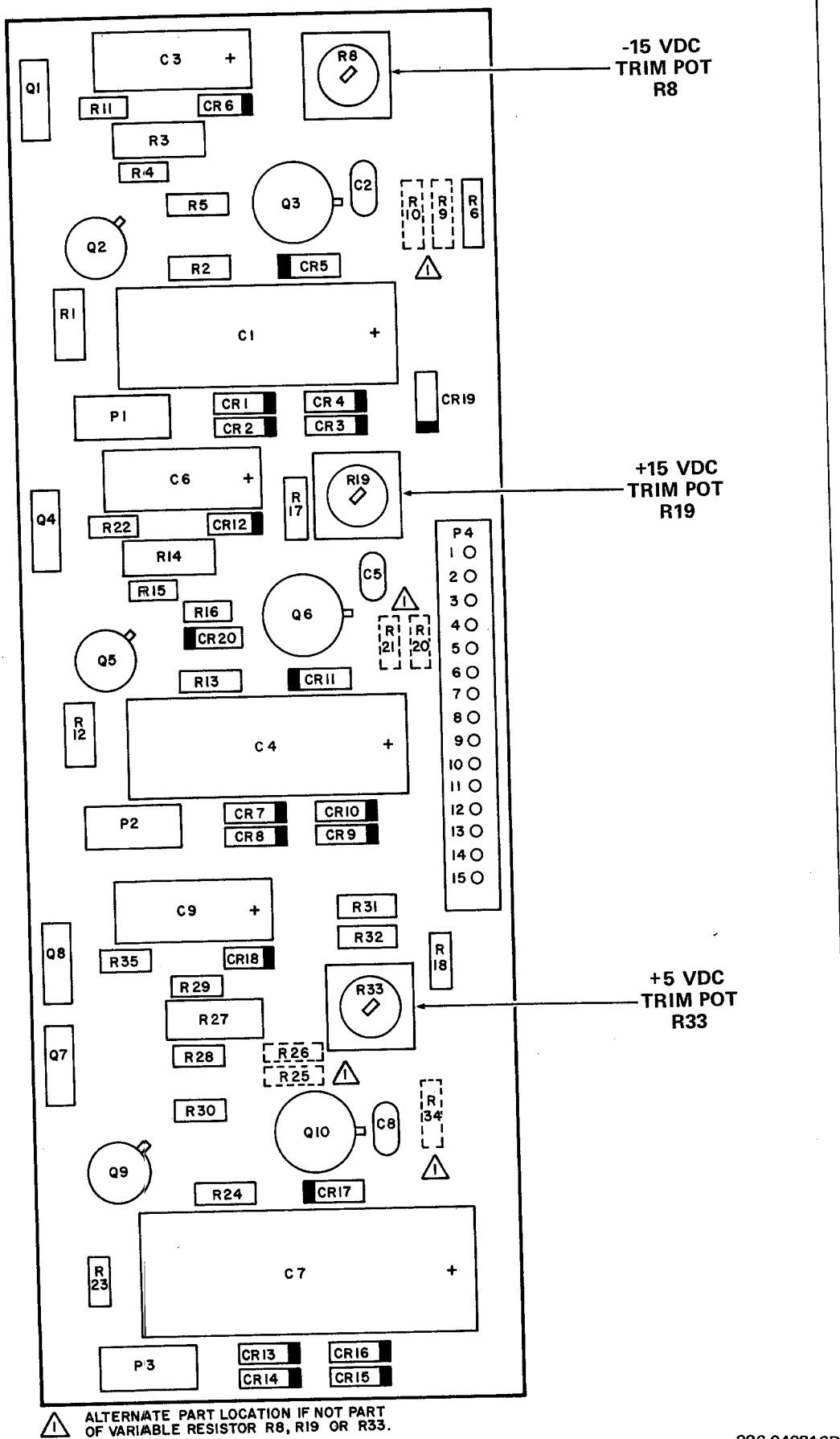
**DO NOT OPERATE OR TROUBLESHOOT BOARD
WITHOUT CP2 IN PLACE.**



NOTE:

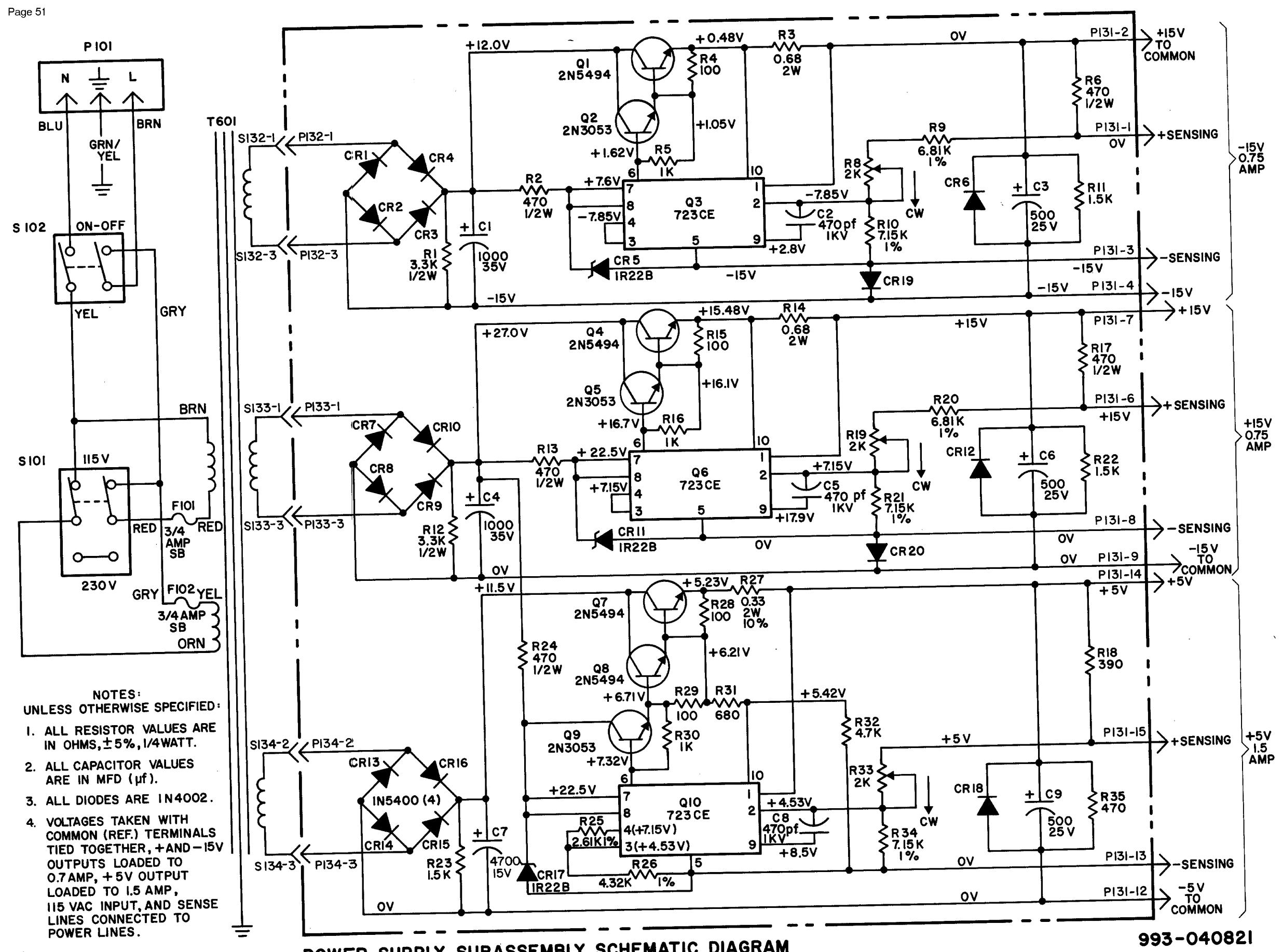
REFER TO THE REPLACEMENT PARTS LIST IN SECTION 5 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.





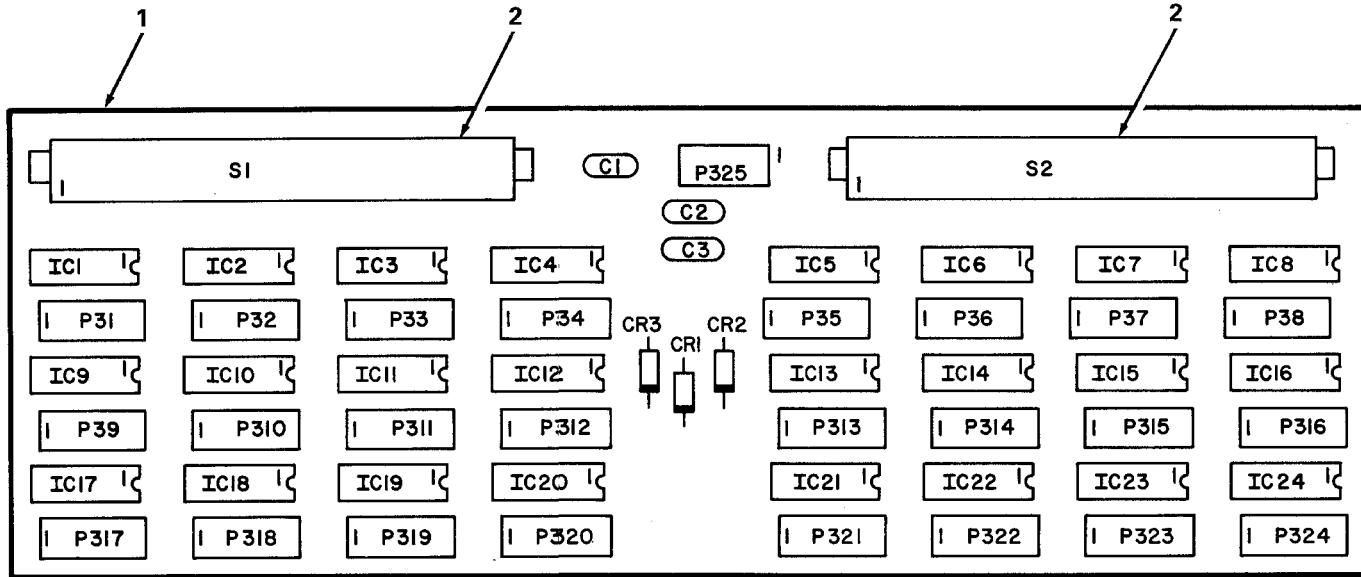
NOTES:

1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 5 FOR THE PART NUMBER AND DESCRIPTION OF EACH REFERENCE DESIGNATOR.
2. TO VERIFY IF POWER SUPPLIES ARE OPERATING:
 - UNPLUG P4.
 - CONNECT PINS 2, 9, 12, AND 13 TOGETHER (ALL GREEN AND WHITE/GREEN WIRES).
 - MEASURE IF THERE ARE OUTPUT VOLTAGES.
 - MEASUREMENTS WILL VARY FROM NOMINAL BUT WILL INDICATE IF SUPPLIES ARE FUNCTIONING.

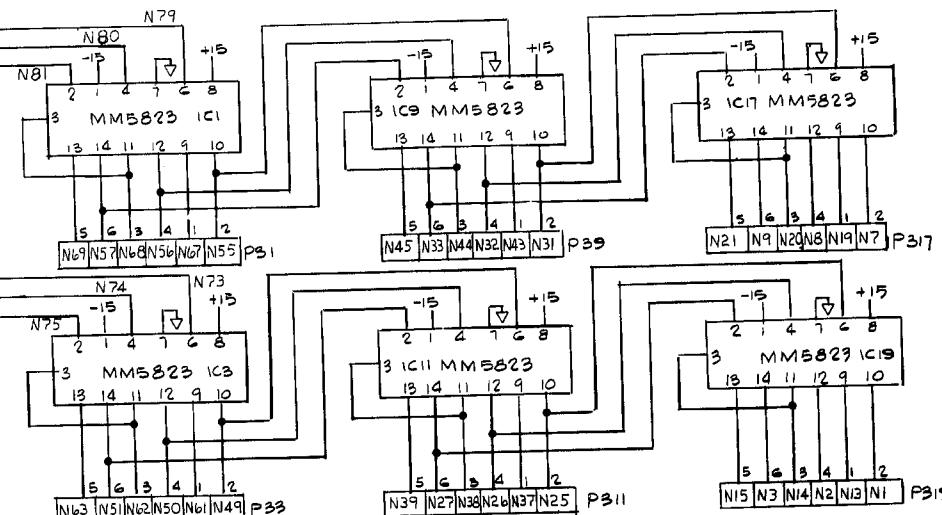
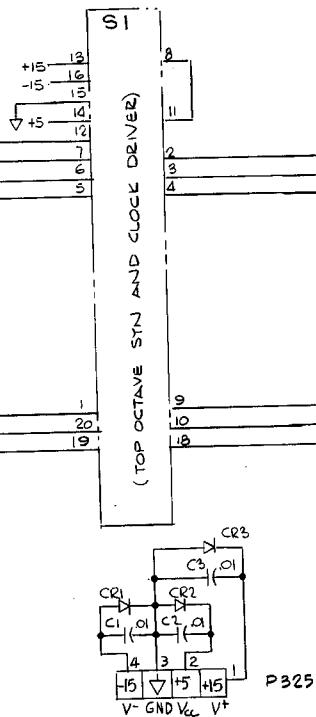
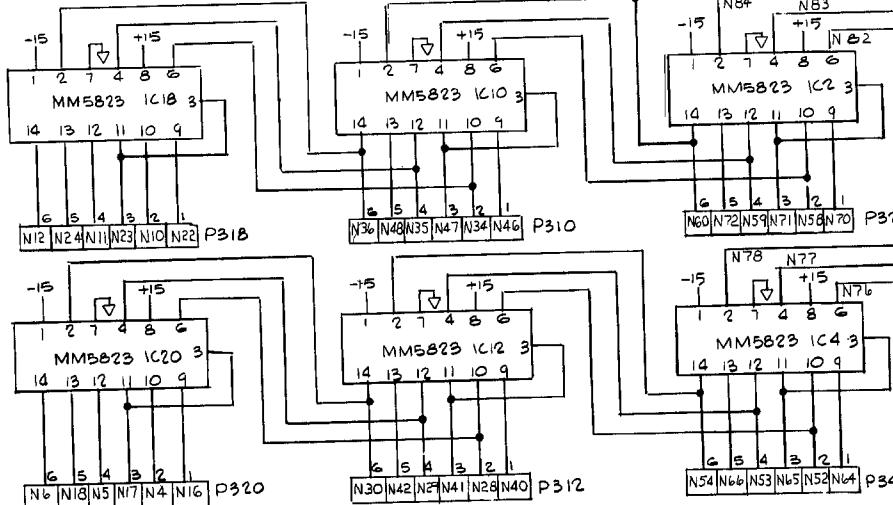
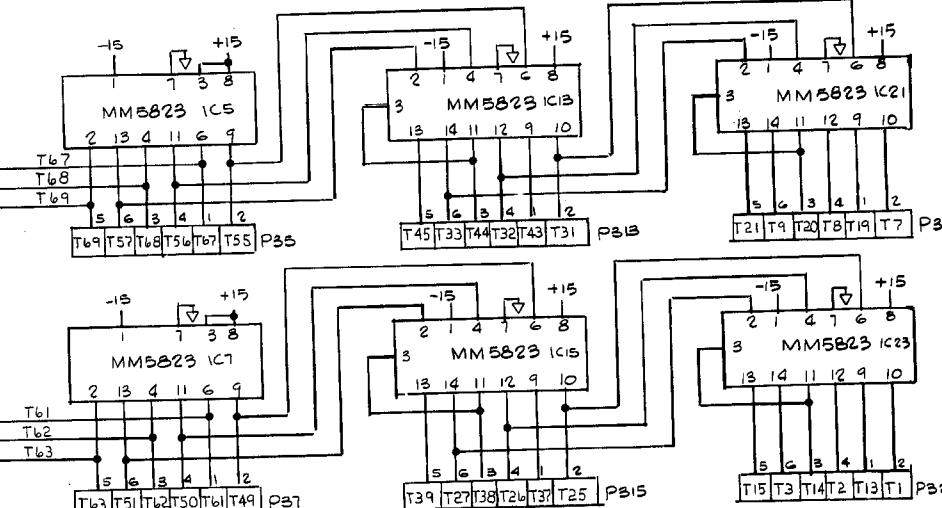
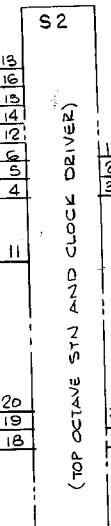
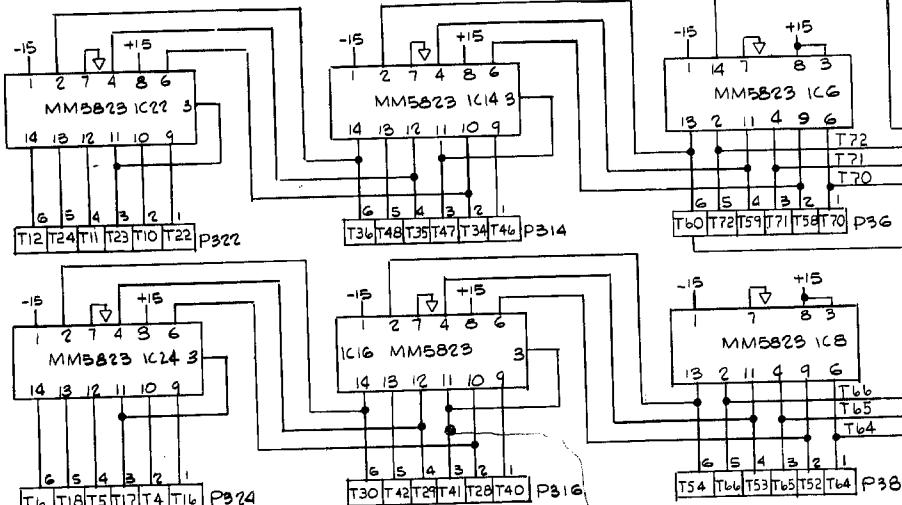


NOTES:

1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 11 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.
2. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P37 INDICATES IT IS PART OF BOARD 3. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.

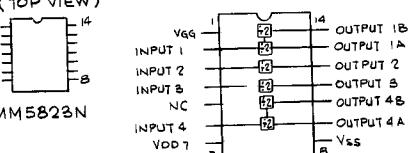


996-040135C

RANK #2
DIVIDERRANK #1
DIVIDER

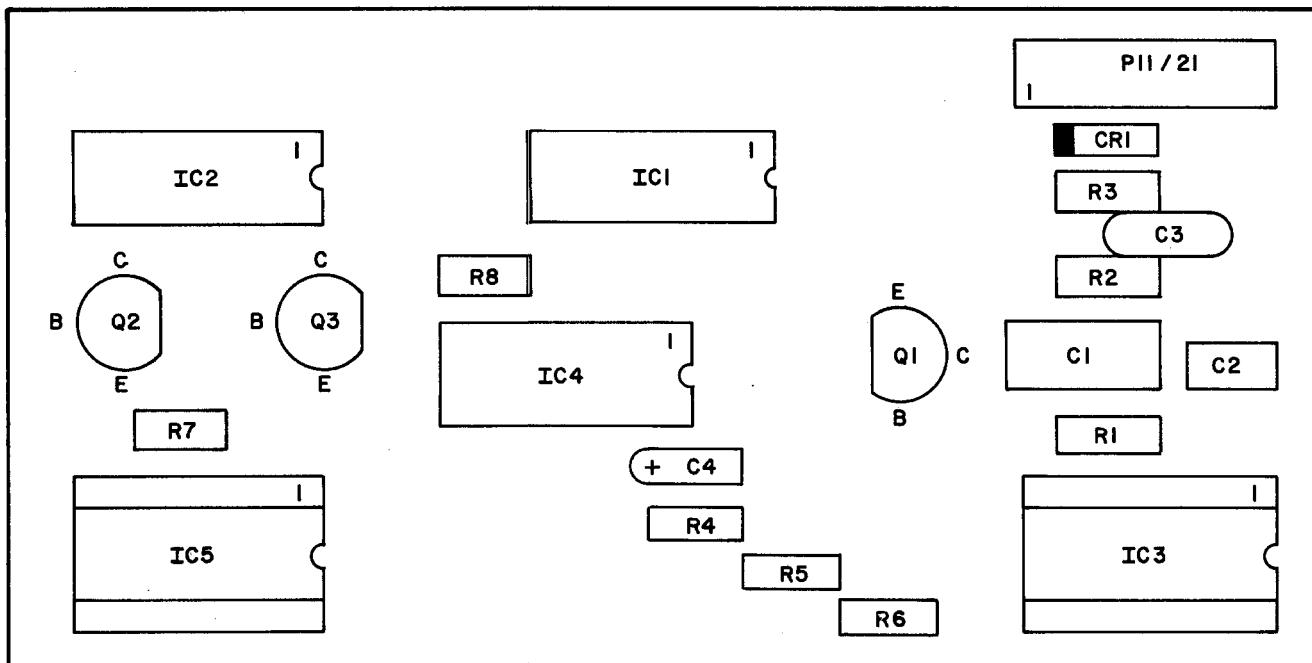
NOTES:
UNLESS OTHERWISE SPECIFIED -
1. ALL CAPACITOR VALUES ARE IN MFD (μF)
2. ALL DIODES ARE IN4004
3. N AND T SUFFIXES INDICATE NOTE NUMBER,
T BEING LOWEST NOTE ON KEYBOARD.

Brücke auf
S2
PIN 17

COMPONENT BASING
(TOP VIEW)BOARD #3

NOTES:

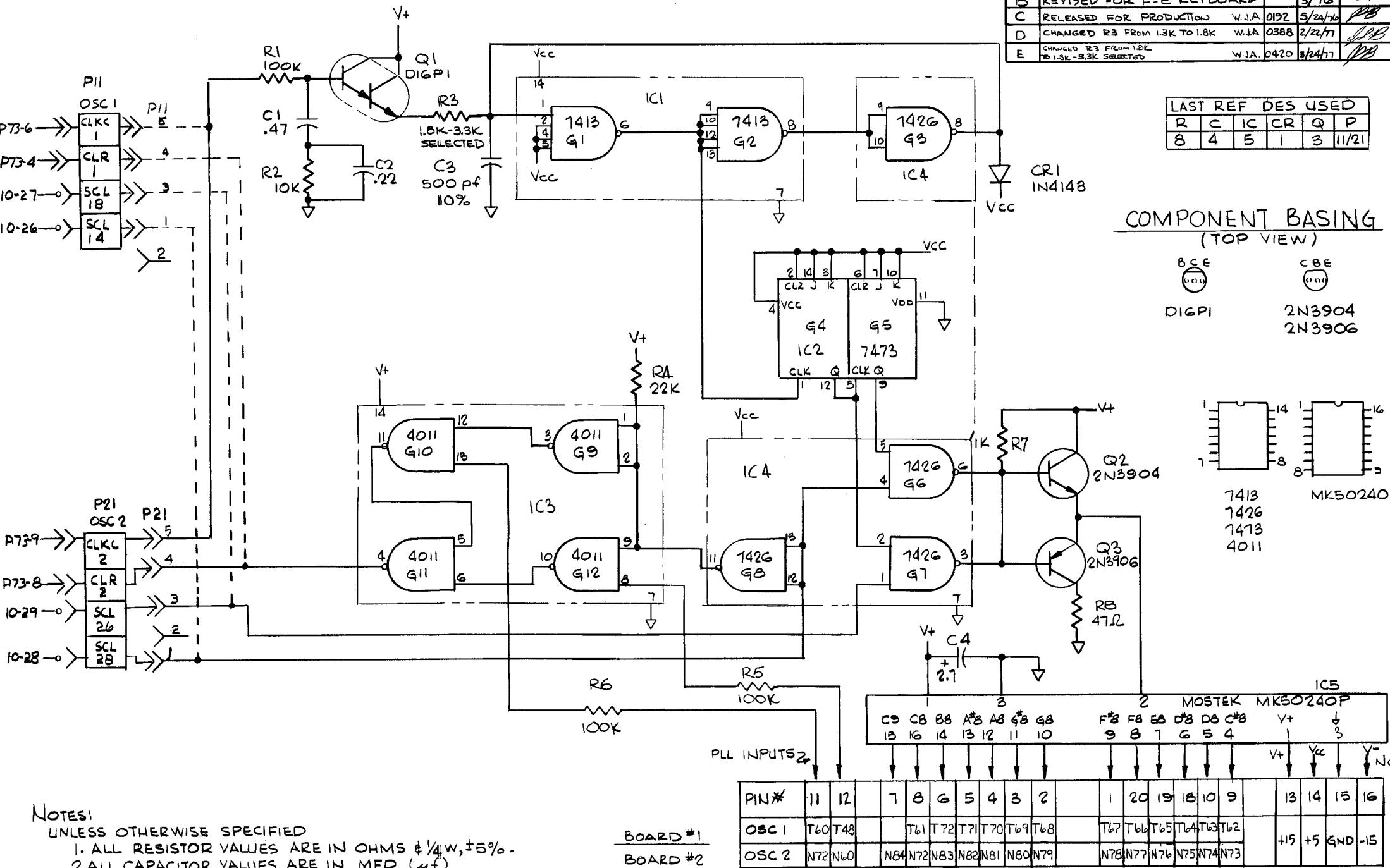
1. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 11 FOR THE PART NUMBER AND DESCRIPTION OF EACH REFERENCE DESIGNATOR.
2. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P11 INDICATES IT IS PART OF BOARD 1. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.



996-040153D

REVISIONS				
SYM	DESCRIPTION	E O	DATE	APPROVED
A	REVISED FOR C-B KEYBOARD		11/75	✓
B	REVISED FOR F-E KEYBOARD		3/76	✓
C	RELEASED FOR PRODUCTION W.J.A 0192	5/24/76	✓	
D	CHANGED R3 FROM 1.8K TO 1.8K W.J.A 0388	2/22/77	✓	
E	CHANGED R3 FROM 1.8K TO 1.8K-3.3K SELECTED W.J.A. 0420	3/24/77	✓	

LAST REF DES USED					
R	C	IC	CR	Q	P
8	4	5	1	3	11/21



NOTES:

UNLESS OTHERWISE SPECIFIED

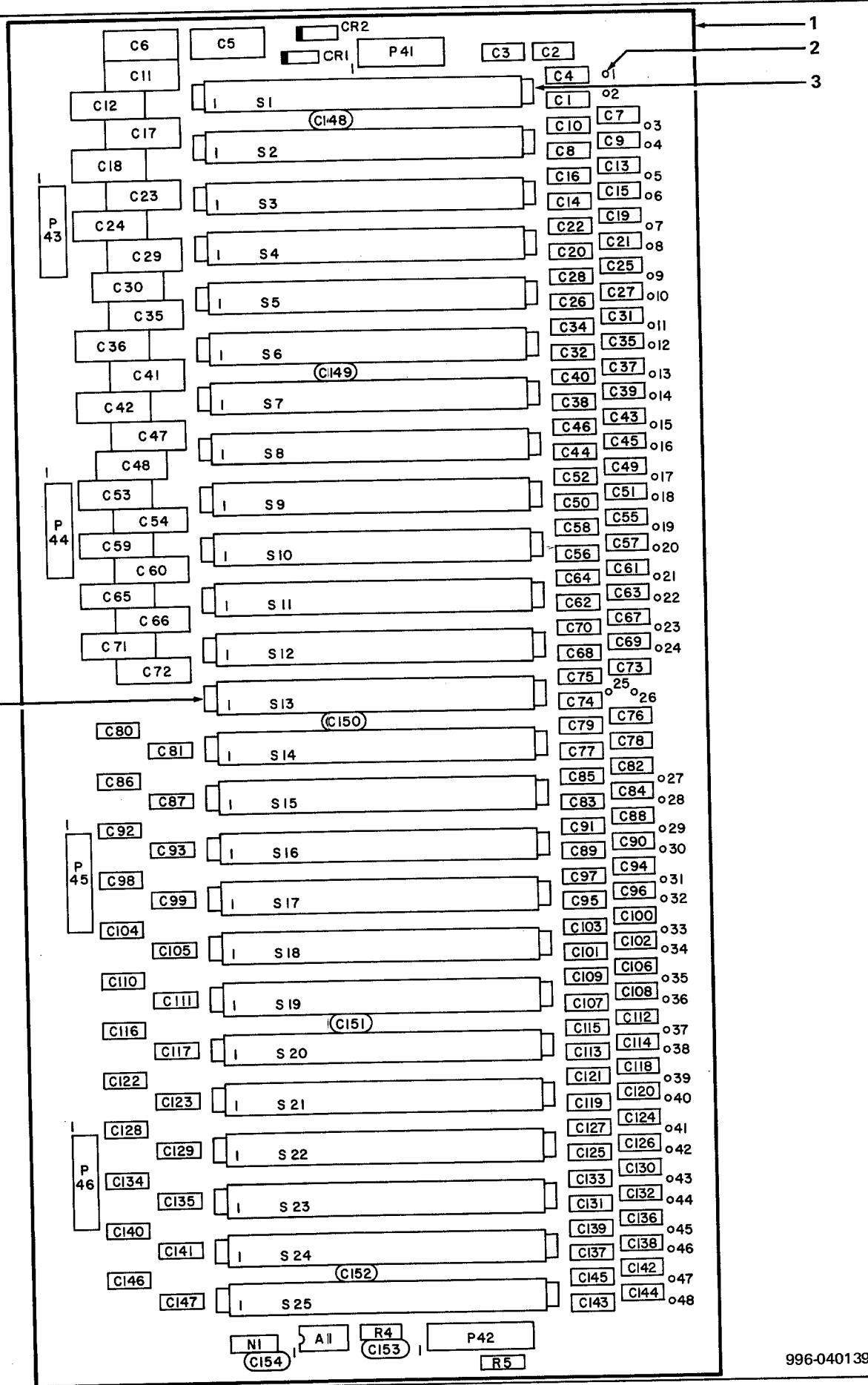
1. ALL RESISTOR VALUES ARE IN OHMS $\frac{1}{4}$ W, $\pm 5\%$.
2. ALL CAPACITOR VALUES ARE IN MFD (μ F)

BOARD #1
BOARD #2

PIN*	11	12	7	8	6	5	4	3	2	1	20	19	18	10	9	13	14	15	16
OSC 1	T60	T48		T61	T72	T71	T70	T69	T68	T67	T66	T65	T64	T63	T62	+15	+5	GND	-15
OSC 2	N72	N60		N84	N72	N83	N82	N81	N80	N79	N78	N77	N76	N75	N74	N73			

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE IN INCHES AMOUNT = 1/16 INCHES 2 PLACE DECIMALS = .005 3 PLACE DECIMALS = .01 LEAD FINISH ON ALL SURFACES	DRAWN BY J.M.P. 4-75 CHECK 5/24/76 GRP ENGR. AOM 4/14 REVIEW QC. <i>[Signature]</i> 5/26 SUPERVISOR <i>[Signature]</i> 5/26 981-040151 203A NEXT ASSY MODEL NO. C APPLICATION		moog MUSIC INC. WILLIAMSVILLE, NEW YORK
BRILLED HOLE TOL 0.040-.125DIA.005-.020DIA. 1.25-.250DIA.005-.020DIA. 2.00-.500DIA.005-.020DIA.	SIZE	CODE IDENT	993-040150
WT.			
SHEET 1 OF 1			

HIGH FREQUENCY
OSCILLATOR SCHEMATIC



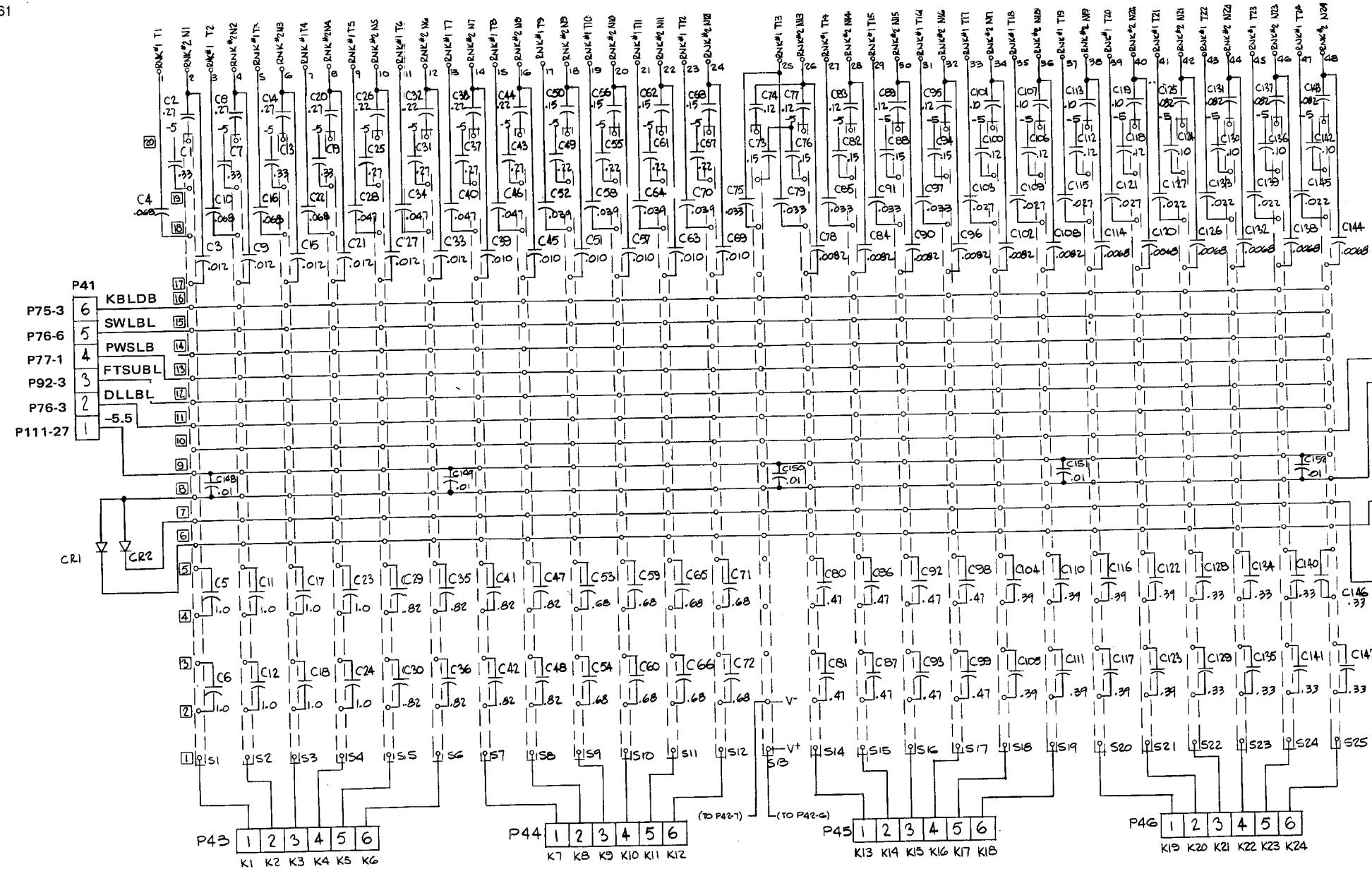
LOW MOTHER BOARD VOLTAGES

P41-PINS	1	2	3	4	5	6
STRING	1	-5.50	-3.68	-5.51	-7.36	+5.90
P PIANO	2	-5.50	-4.00	-5.51	-7.44	-2.65
R ORGAN	3	-5.50	-3.68	-5.57	-7.93	+9.90
E HARPSI	4	-5.50	-3.68	-5.68	-8.15	+10.61
S FUNK	5	-5.50	-3.68	-5.50	-6.90	+3.13
E CLAV	6	-5.50	-3.85	-5.70	-8.45	+8.18
T VIBES	7	-5.50	-3.90	-5.50	-4.54	-13.41
BRASS	8	-5.50	-3.68	-5.65	-13.80	+10.31

NOTES:

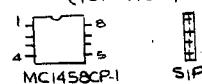
1. MOTHER BOARD VOLTAGES READ ON CONNECTORS, WITH CONNECTORS IN PLACE.
2. VOLTAGES ARE FOR INSTRUMENTS ABOVE S/N 3000.
3. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 8 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED FOR C-8 KEYBOARD	11/15	
B	REVISED FOR F-8 KEYBOARD	3/76	
C	RELEASED FOR PRODUCTION	7/76	
D	UPDATE PER ED-0292	11/24	



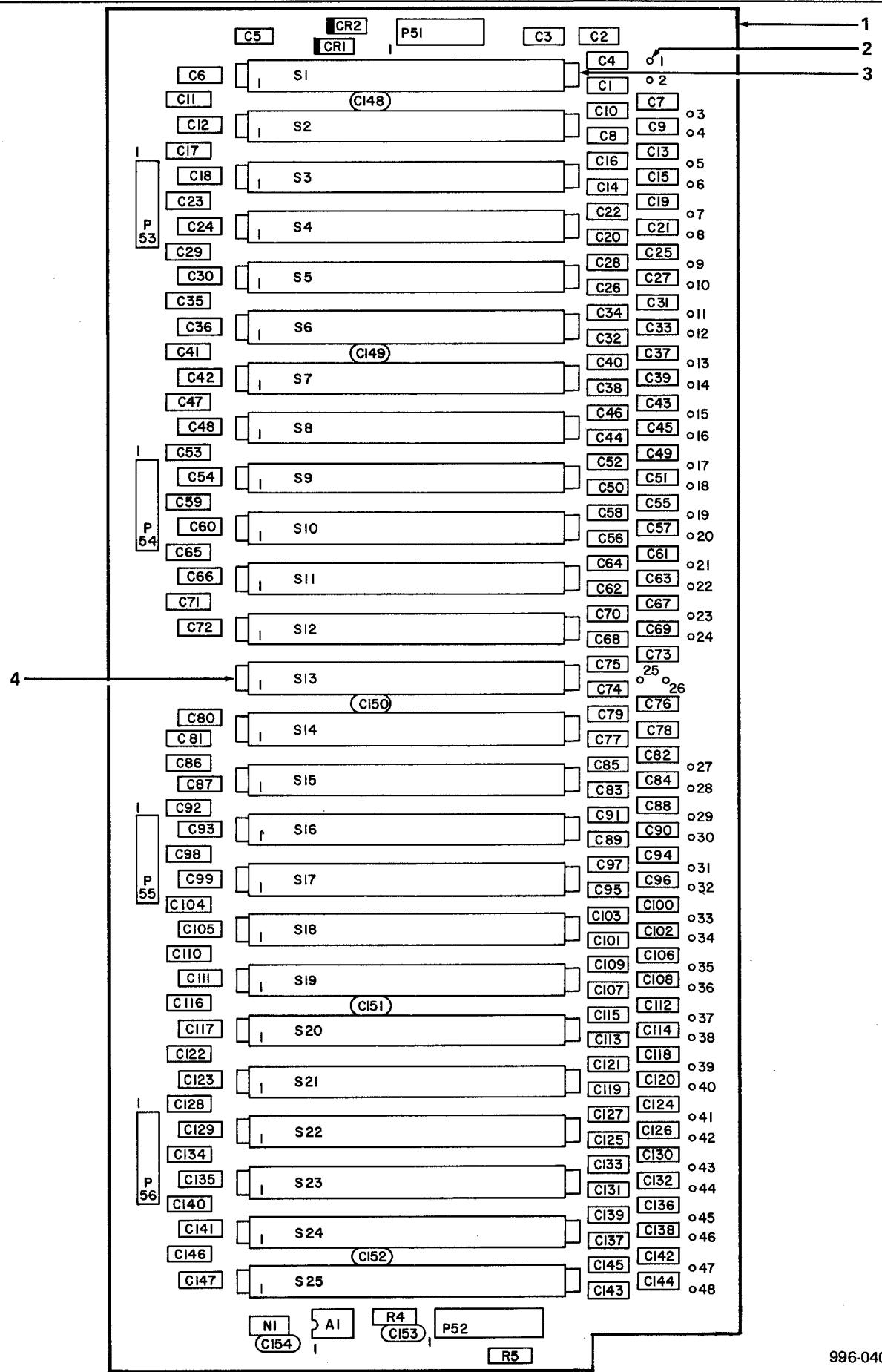
LAST REF DES USED					
R	C	A	CR	P	S
5154	1	2	6	25	

COMPONENT BASING
(TOP VIEW)



BOARD #4

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
DRAWN BY	188	5/5	
CHECKED	W-1	7/1/76	
1 PLACE IN CIRCLE = 100			
2 PLACES IN CIRCLE = 200			
3 PLACES IN CIRCLE = 300			
4 PLACES IN CIRCLE = 400			
5 PLACES IN CIRCLE = 500			
6 PLACES IN CIRCLE = 600			
7 PLACES IN CIRCLE = 700			
8 PLACES IN CIRCLE = 800			
9 PLACES IN CIRCLE = 900			
10 PLACES IN CIRCLE = 1000			
11 PLACES IN CIRCLE = 1100			
12 PLACES IN CIRCLE = 1200			
13 PLACES IN CIRCLE = 1300			
14 PLACES IN CIRCLE = 1400			
15 PLACES IN CIRCLE = 1500			
16 PLACES IN CIRCLE = 1600			
17 PLACES IN CIRCLE = 1700			
18 PLACES IN CIRCLE = 1800			
19 PLACES IN CIRCLE = 1900			
20 PLACES IN CIRCLE = 2000			
21 PLACES IN CIRCLE = 2100			
22 PLACES IN CIRCLE = 2200			
23 PLACES IN CIRCLE = 2300			
24 PLACES IN CIRCLE = 2400			
25 PLACES IN CIRCLE = 2500			
26 PLACES IN CIRCLE = 2600			
27 PLACES IN CIRCLE = 2700			
28 PLACES IN CIRCLE = 2800			
29 PLACES IN CIRCLE = 2900			
30 PLACES IN CIRCLE = 3000			
31 PLACES IN CIRCLE = 3100			
32 PLACES IN CIRCLE = 3200			
33 PLACES IN CIRCLE = 3300			
34 PLACES IN CIRCLE = 3400			
35 PLACES IN CIRCLE = 3500			
36 PLACES IN CIRCLE = 3600			
37 PLACES IN CIRCLE = 3700			
38 PLACES IN CIRCLE = 3800			
39 PLACES IN CIRCLE = 3900			
40 PLACES IN CIRCLE = 4000			
41 PLACES IN CIRCLE = 4100			
42 PLACES IN CIRCLE = 4200			
43 PLACES IN CIRCLE = 4300			
44 PLACES IN CIRCLE = 4400			
45 PLACES IN CIRCLE = 4500			
46 PLACES IN CIRCLE = 4600			
47 PLACES IN CIRCLE = 4700			
48 PLACES IN CIRCLE = 4800			

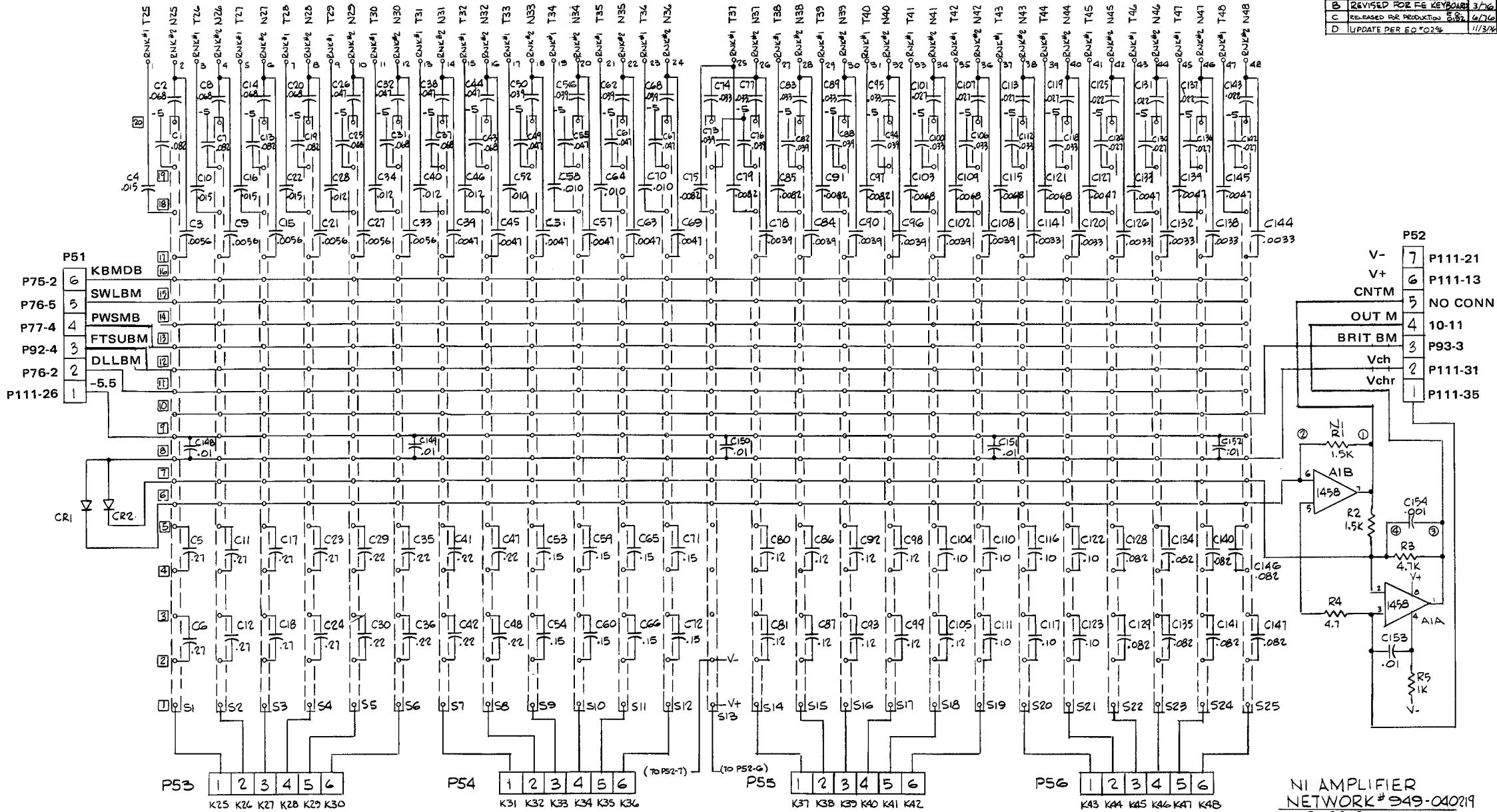


MEDIUM MOTHER BOARD VOLTAGES

	P51-PINS	1	2	3	4	5	6	
	STRING	1	-5.50	-3.68	-5.51	-7.87	+5.64	-5.28
P	PIANO	2	-5.50	-4.00	-5.51	-7.44	-2.64	-8.73
R	ORGAN	3	-5.50	-3.68	-5.54	-8.20	+9.93	-3.83
E	HARPSI	4	-5.50	-3.68	-5.65	-8.35	+10.44	-9.16
S	FUNK	5	-5.50	-3.68	-5.50	-6.90	+3.09	-7.00
E	CLAV	6	-5.50	-3.85	-5.70	-8.50	+.823	-8.33
T	VIBES	7	-5.50	-3.98	-5.50	-4.57	-13.52	-7.54
	BRASS	8	-5.50	-3.68	-5.66	-13.80	+10.50	-8.39

NOTES:

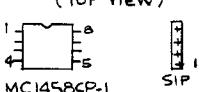
1. MOTHER BOARD VOLTAGES READ ON CONNECTORS, WITH CONNECTORS IN PLACE.
2. VOLTAGES ARE FOR INSTRUMENTS ABOVE S/N 3000.
3. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 8 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.
4. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P51 INDICATES IT IS PART OF BOARD 5. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.



NOTES:
 UNLESS OTHERWISE SPECIFIED
 1. ALL RESISTOR VALUES ARE IN OHMS 1/4W ±5%
 2. ALL CAPACITOR VALUES ARE IN MFD (μF)
 3. ALL DIODES ARE IN4004
 4. N AND T SUFFIXES INDICATE NOTE NUMBER,
 1 BEING LOWEST NOTE ON KEYBOARD.

LAST REF DES USED					
R	C	A	I	P	S
5 154	1	2	6	25	

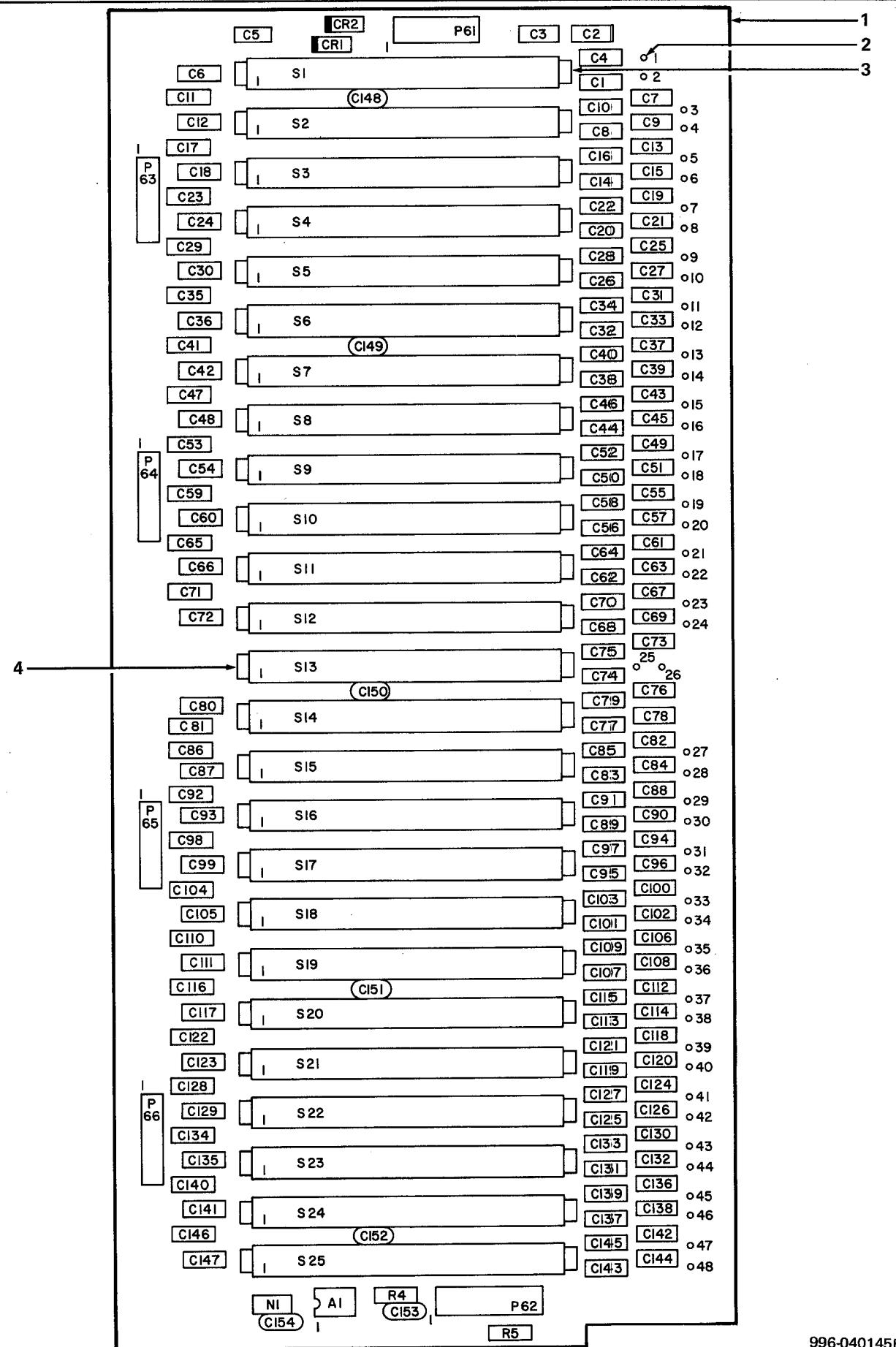
COMPONENT BASING (TOP VIEW)



BOARD #5

ITEM	PART NUMBER	DESCRIPTION	MATERIAL
1	DRAWN BY 100 SCS		
2	CHECK W. 1A 4/26/76		
3	GRP ENGR 4/26/76		
4	REVIEW OC ACT 6/10/76		
5	SUPERVISOR 6/10/76		
6	MA-4041 203A		
7	NEXT ASSY MODEL NO. D		
8	CODE IDENT 993-040140		
9	APPLICATION		
10	SCALE —		
11	WT.		
12	SHEET 1 OF 1		

REMARKS:
 UNLESS OTHERWISE SPECIFIED
 1. ALL RESISTOR VALUES ARE IN OHMS 1/4W ±5%
 2. ALL CAPACITOR VALUES ARE IN MFD (μF)
 3. ALL DIODES ARE IN4004
 4. N AND T SUFFIXES INDICATE NOTE NUMBER,
 1 BEING LOWEST NOTE ON KEYBOARD.

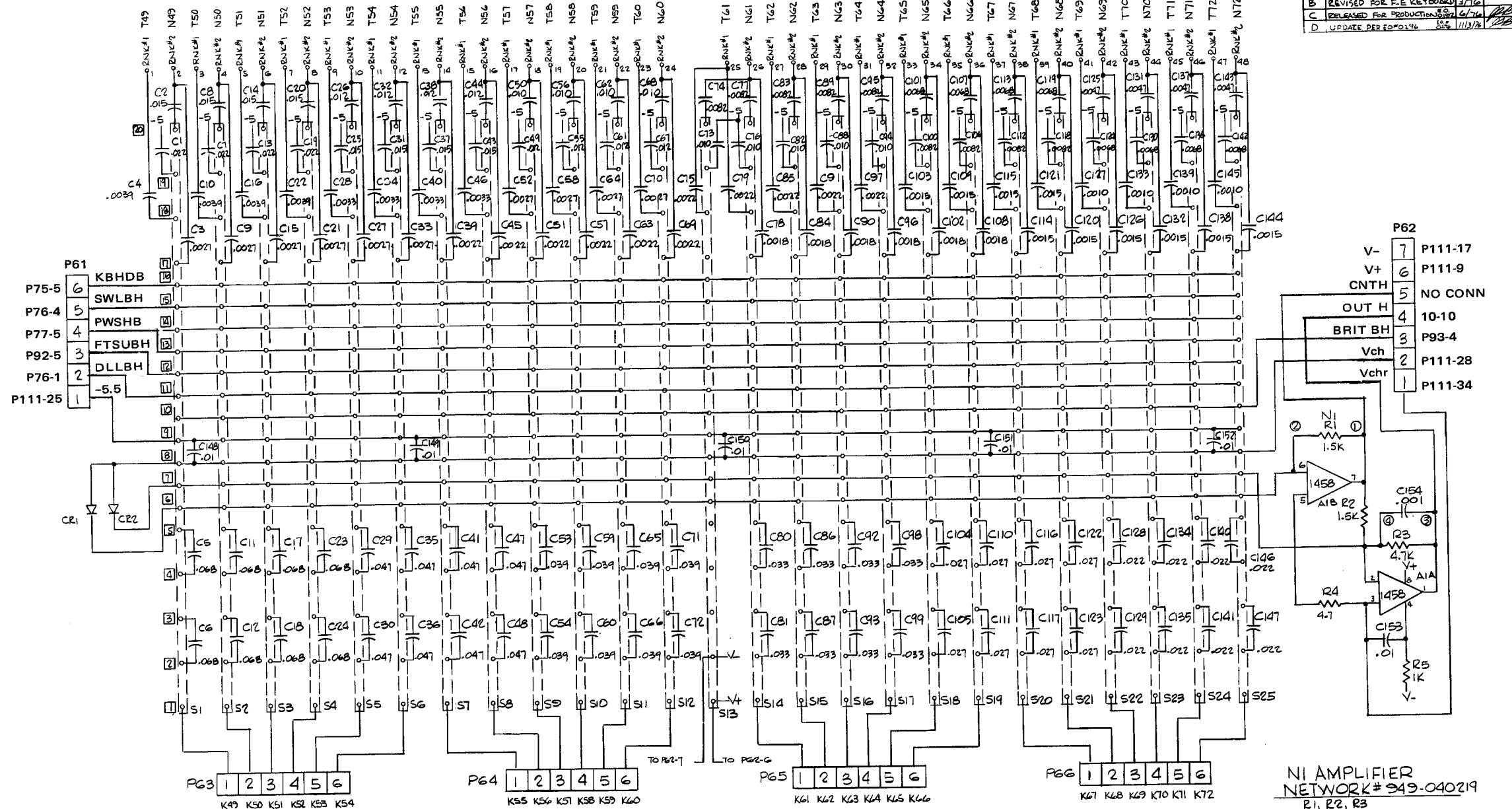


HIGH MOTHER BOARD VOLTAGES

P61-PINS	1	2	3	4	5	6
STRING	1	-5.50	-3.68	-5.51	-7.82	+5.64
P PIANO	2	-5.50	-4.00	-5.52	-7.44	-2.64
R ORGAN	3	-5.50	-3.68	-5.56	-8.20	+9.94
E HARPSI	4	-5.50	-3.68	-5.63	-8.50	+10.44
S FUNK	5	-5.50	-3.68	-5.50	-6.90	+3.09
E CLAV	6	-5.50	-3.85	-5.71	-8.50	+8.24
T VIBES	7	-5.50	-3.98	-5.50	-4.58	-13.52
BRASS	8	-5.50	-3.68	-5.72	-13.83	+10.50

NOTES:

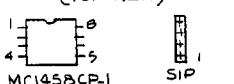
1. MOTHER BOARD VOLTAGES READ ON CONNECTORS, WITH CONNECTORS IN PLACE.
2. VOLTAGES ARE FOR INSTRUMENTS ABOVE S/N 3000.
3. REFER TO THE REPLACEMENT PARTS LIST IN SECTION 8 FOR THE PART NUMBER, DESCRIPTION AND QUANTITY OF EACH INDEX NUMBER OR REFERENCE DESIGNATOR.
4. CONNECTOR DESIGNATORS INCLUDE A CODED REFERENCE PERTAINING TO ITS PRINTED CIRCUIT BOARD ORIGIN, I.E., P61 INDICATES IT IS PART OF BOARD 6. REFER TO TABLE 1-1 FOR OTHER BOARD NUMBERS AND NOMENCLATURE.



NOTES:
 UNLESS OTHERWISE SPECIFIED
 1. ALL RESISTOR VALUES ARE IN OHMS $\frac{1}{4}W, \pm 5\%$
 2. ALL CAPACITOR VALUES ARE IN MFD (μF)
 3. ALL DIODES ARE IN4004
 4. N AND T SUFFIXES INDICATE NOTE NUMBER,
 T BEING LOWEST NOTE ON KEYBOARD.

LAST REF DES USED					
R	C	A	C	P	S
5 154	1 2 6 23				

COMPONENT BASING
(TOP VIEW)

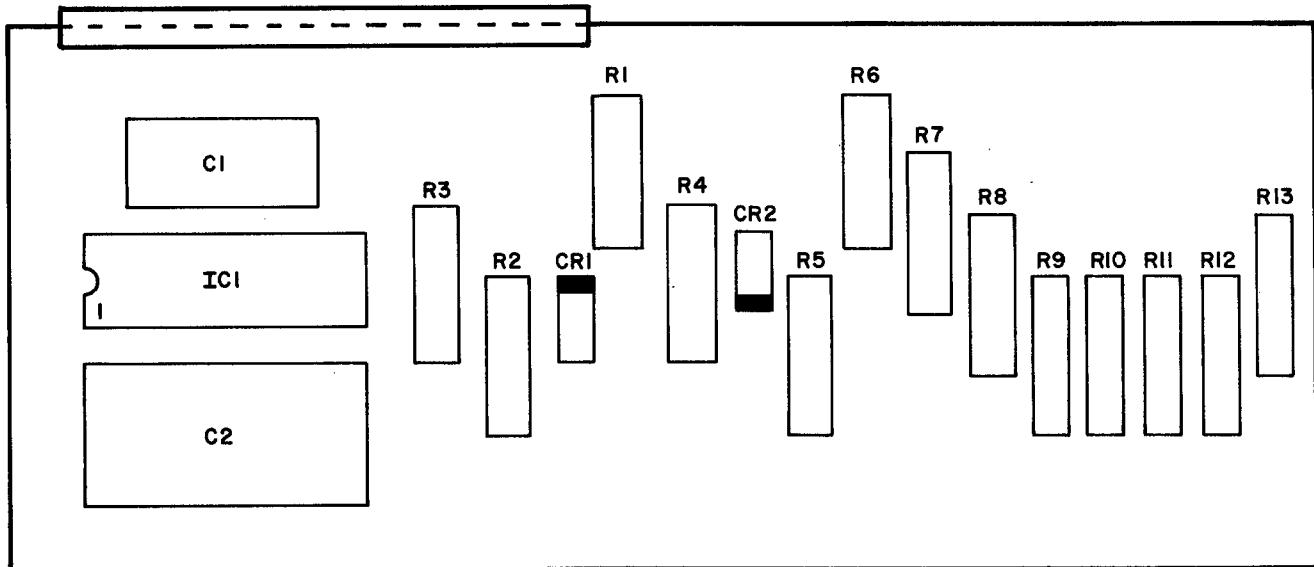


BOARD #6

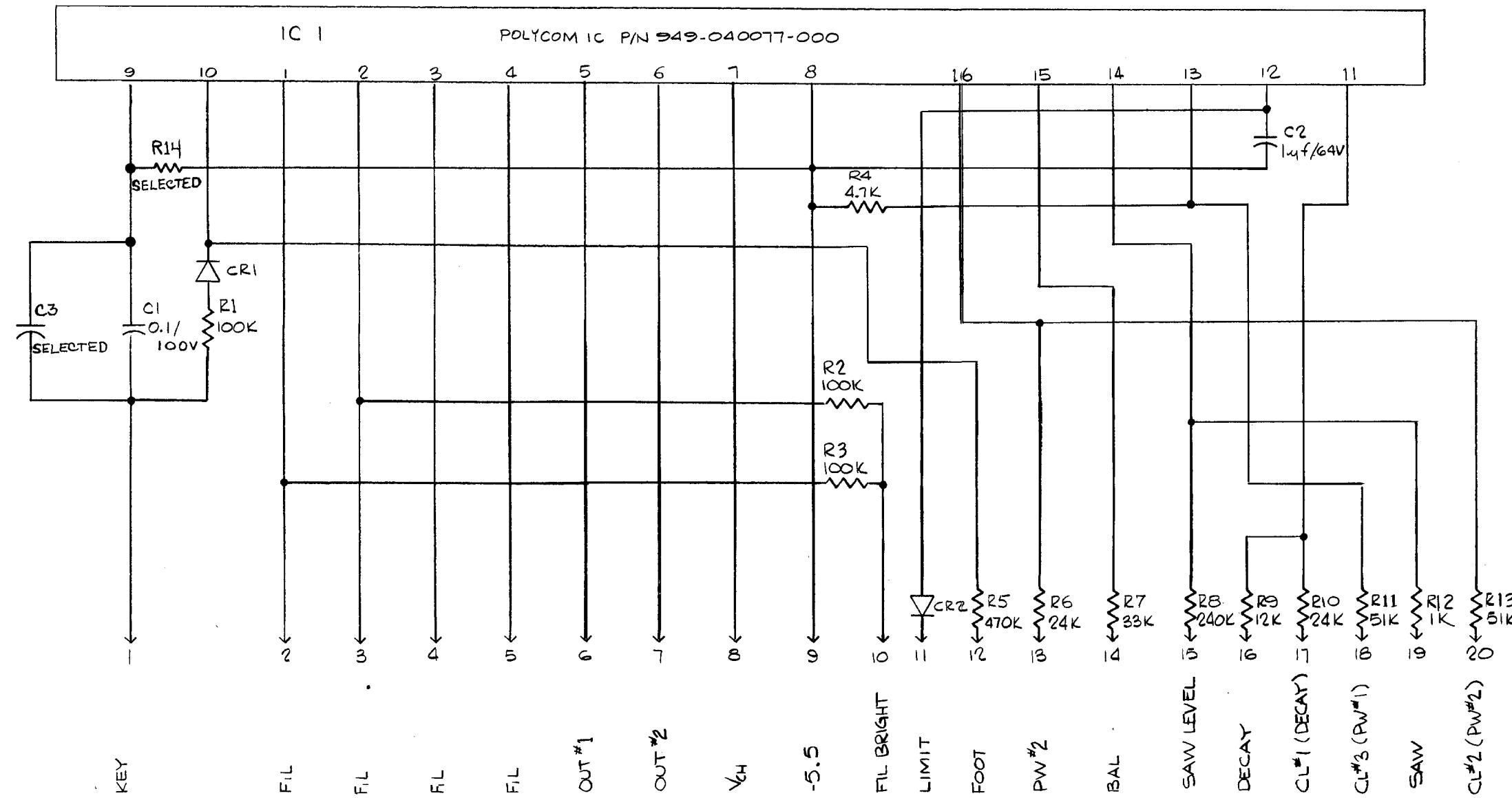
ITEM	PART NUMBER	DESCRIPTION	MATERIAL
1	1458	DRAWN BY JPB 5/6 CHECK W JAS 5/6 GRP ENGR 03/15/76 REVIEW 03/15/76 M14 SUPERVISOR 04/17/76 NEXT ASSY 203A MODEL NO. D APPLICATION	moog MUSIC INC WILLIAMSBURG, NEW YORK HIGH MOTHER BOARD SCHEMATIC, POLYMOOG SIZE CODE IDENT 993-040144 SCALE — WT. 1 OF 1

NOTE:

**REFER TO THE REPLACEMENT PARTS
LIST IN SECTION 8 FOR THE PART
NUMBER AND DESCRIPTION OF
EACH REFERENCE DESIGNATOR.**



996-040149B

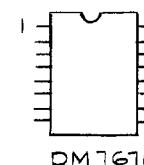


NOTES

UNLESS OTHERWISE SPECIFIED

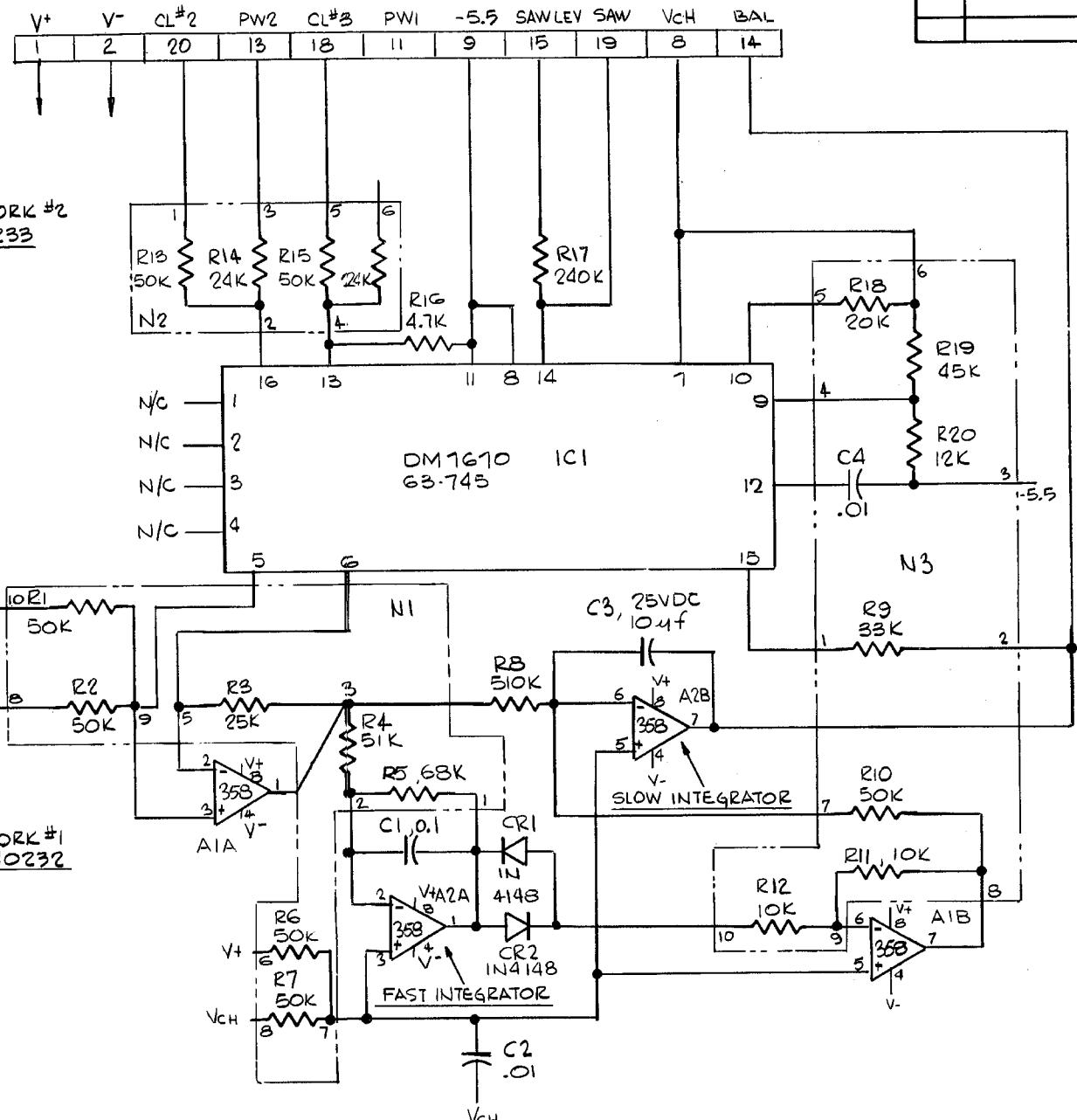
1. ALL RESISTOR VALUES ARE IN OHMS $\frac{1}{4}$ W, $\pm 5\%$.
2. ALL CAPACITOR VALUES ARE IN MFD (μ f) $\pm 10\%$ METALLIZED MYLAR.
3. ALL DIODES IN4148.

COMPONENT BASING (TOP VIEW)



DM 7670

REVISIONS			
SYM	DESCRIPTION	E O	DATE APPROVED
A	RELEASED FOR PRODUCTION W.J.A.	0192	5/24/76 <i>BB</i>



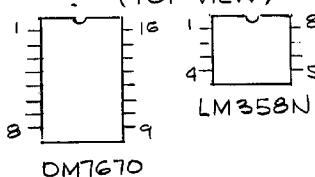
NOTES:

UNLESS OTHERWISE SPECIFIED -

1. ALL RESISTOR VALUES ARE IN OHMS $\frac{1}{4}W, \pm 5\%$.
2. ALL CAPACITOR VALUES ARE IN MFD (μF).

COMPONENT BASING
(TOP VIEW)

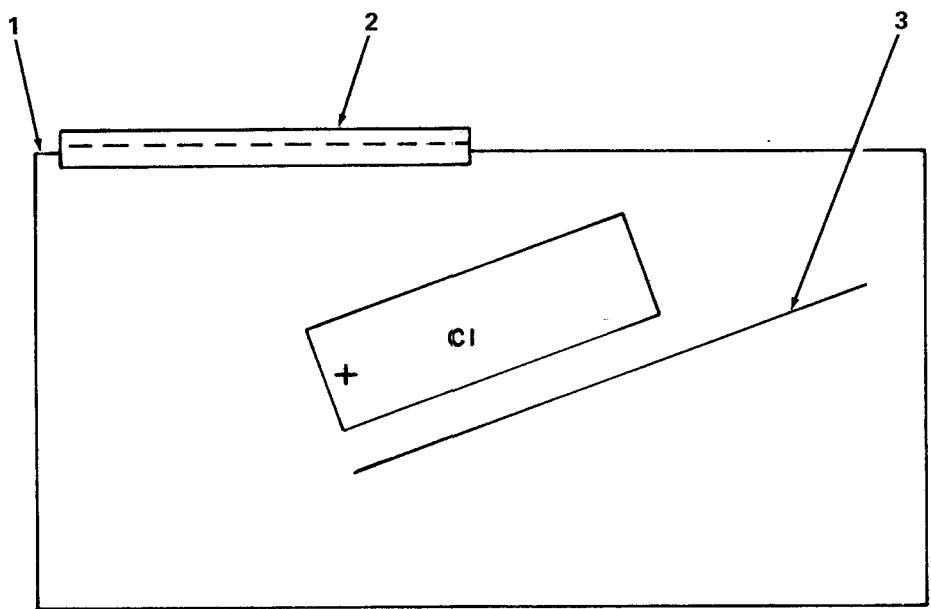
LAST REF DES USED					
R	C	IC	CR	A	N
20	4	1	2	2	3



ITEM	PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS - 1/64 3 PLACE DECIMALS - .005 2 PLACE DECIMALS - .01 FINISH ON ALL SURFACES	DRAWN BY M.P.4-75 CHECK <i>BB</i> 5/24/76 GRP ENGR. <i>Acu</i> 946 REVIEW QC. SUPERVISOR <i>BB</i> 5/24/76 981-040155 203A NEXT ASSY MODEL NO.	moog MUSIC INC. WILLIAMSVILLE, NEW YORK	
DRILLED HOLE TOL 0.40 - 0.125 DIA ± 0.002 in 1.00 - 0.250 DIA ± 0.004 in 2.25 - 0.500 DIA ± 0.004 in 5.00 - 1.750 DIA ± 0.005 in			
SIZE CODE IDENT	993-040154		
APPLICATION	SCALE ~	WT.	SHEET 1 OF 1

NOTE:

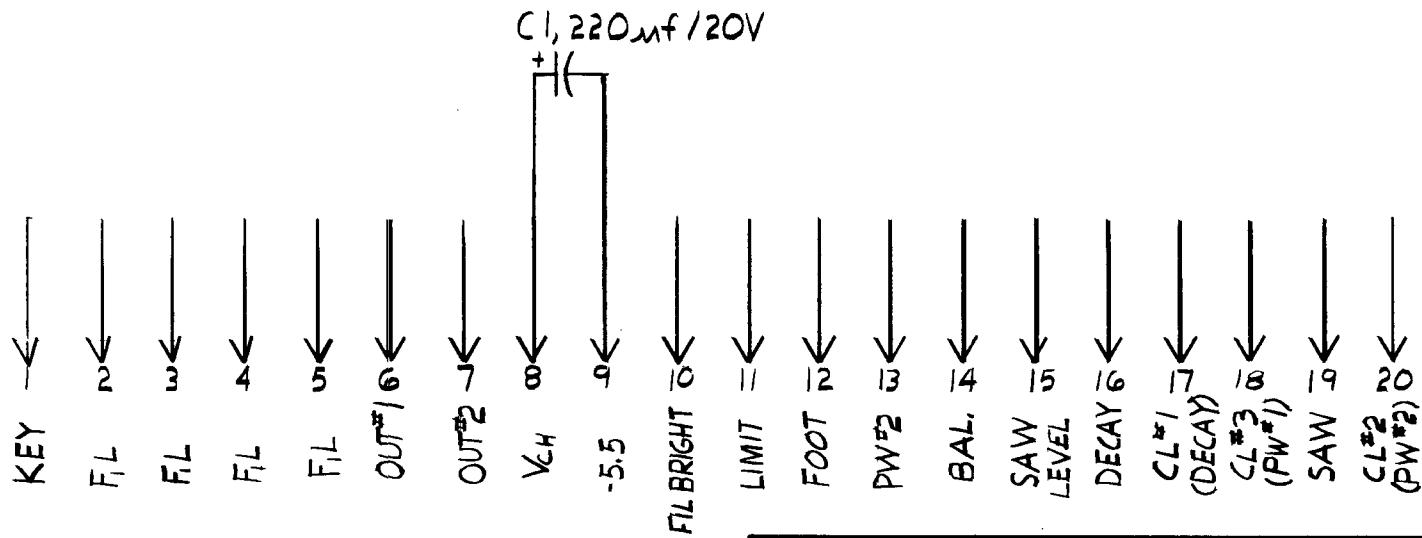
**REFER TO THE REPLACEMENT PARTS
LIST IN SECTION 8 FOR THE PART
NUMBER, DESCRIPTION AND
QUANTITY OF EACH INDEX NUMBER
OR REFERENCE DESIGNATOR.**



996-040635A

REVISIONS

SYM	DESCRIPTION	E O	DATE	APPROVED
-	RELEASED FOR PRODUCTION JML	0233	8/11/76	<i>JML</i>



ITEM	PART NUMBER	DESCRIPTION		MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE: FRACTIONS ± 1/64 ANGLES = 1/2° 3 PLACE DECIMALS ± .005 2 PLACE DECIMALS ± .01 125 FINISH ON ALL SURFACES		DRAWN BY JML 8/76		moog MUSIC INC. WILLIAMSVILLE, NEW YORK
CHECK W.J.A 8/76		GRP ENGR. <i>W.B. 9/16/76</i>		
REVIEW QC.		SUPERVISOR <i>W.B. 9/16/76</i>		BY PASS CARD SCHEMATIC, POLY MOOG
996-040635		203A	SIZE	
NEXT ASSY		MODEL NO.	B	993-040634
		APPLICATION	SCALE ~	WT.
				SHEET 1 OF 1